Debtors' Ex. 117
(Part 1 of 2)

Doing Business 2020

Comparing Business Regulation in 190 Economies

WORLD BANK GROUP

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Regulation in
190 Economies

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Contents

- *Doing Business 2020* is the 17th in a series of annual studies investigating the regulations that enhance business activity and those that constrain it. *Doing Business* presents quantitative indicators on business regulations and the protection of property rights that can be compared across 190 economies—from Afghanistan to Zimbabwe—and over time.
- Regulations affecting 12 areas of the life of a business are covered: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency, employing workers, and contracting with the government. The employing workers and contracting with the government indicator sets are not included in this year's ranking on the ease of doing business.
- Data in *Doing Business 2020* are current as of May 1, 2019. The indicators are used to analyze economic outcomes and identify what reforms of business regulation have worked, where and why.

Foreword

The *Doing Business 2020* study shows that developing economies are catching up with developed economies in ease of doing business.

Still, the gap remains wide. An entrepreneur in a low-income economy typically spends around 50 percent of the country's per-capita income to launch a company, compared with just 4.2 percent for an entrepreneur in a high-income economy. It takes nearly six times as long on average to start a business in the economies ranked in the bottom 50 as in the top 20.

There's ample room for developing economies to catch up with developed countries on most of the *Doing Business* indicators. Performance in the area of legal rights, for example, remains weakest among low- and middle-income economies.

Doing Business recognizes the important work countries have done to improve their regulatory environments. Among the 10 economies that advanced the most, efforts were focused on the areas of starting a business, dealing with construction permits, and trading across borders. In general, economies that score the highest share several features, including the widespread use of electronic systems and online platforms to comply with regulatory requirements.

At the same time, the least reformed area was resolving insolvency. Putting in place reorganization procedures reduces the failure rates of small and medium-size enterprises and prevents the liquidation of insolvent but viable businesses.

Doing Business is a valuable tool that governments can use to design sound regulatory policies. By giving policymakers a way to benchmark progress, it stimulates policy debate, both by exposing potential challenges and by identifying good practices and lessons learned.

It's important to note that *Doing Business* isn't meant to be an investment guide, but rather a measurement of ease of doing business. Potential investors consider many other factors, such as the overall quality of an economy's business environment and its national competitiveness, macroeconomic stability, development of the financial system, market size, rule of law, and the quality of the labor force.

Ease of doing business is an important springboard to structural reforms that encourage broad-based growth. The World Bank Group stands ready to help countries move forward.

David R. Malpass
President
The World Bank Group

Acknowledgments

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OVERVIEW

Tackling burdensome regulation

- Worldwide, 115 economies made it easier to do business.
- The economies with the most notable improvement in *Doing Business 2020* are Saudi Arabia, Jordan, Togo, Bahrain, Tajikistan, Pakistan, Kuwait, China, India, and Nigeria.
- Only two African economies rank in the top 50 on the ease of doing business; no Latin American economies rank in this group.

At its core, regulation is about freedom to do business. Regulation aims to prevent worker mistreatment by greedy employers (regulation of labor), to ensure that roads and bridges do not collapse (regulation of public procurement), and to protect one's investments (minority shareholder protections). All too often, however, regulation misses its goal, and one inefficiency replaces another, especially in the form of government overreach in business activity. Governments in many economies adopt or maintain regulation that burdens entrepreneurs. Whether by intent or ignorance, such regulation limits entrepreneurs' ability to freely operate a private business. As a result, entrepreneurs resort to informal activity, away from the oversight of regulators and tax collectors, or seek opportunities abroad—or join the ranks of the unemployed. Foreign investors avoid economies that use regulation to manipulate the private sector.

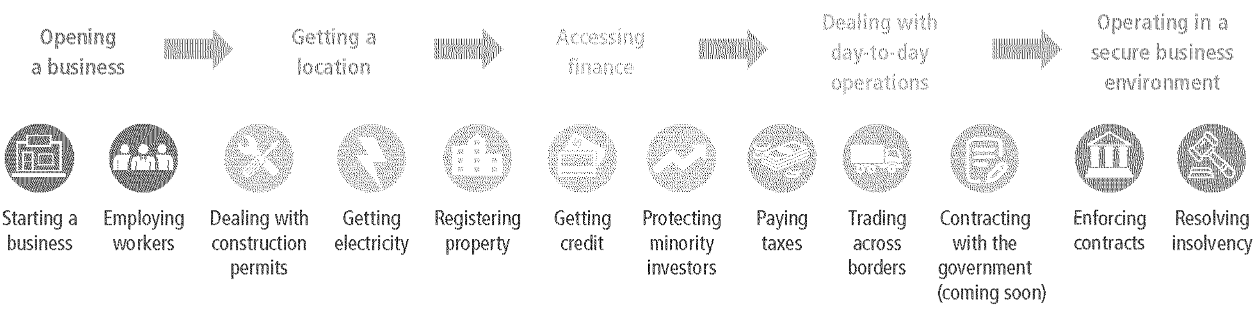
By documenting changes in regulation in 12 areas of business activity in 190 economies, *Doing Business* analyzes regulation that encourages efficiency and supports freedom to do business.[1] The data collected by *Doing Business* address three questions about government. First, when do governments change regulation with a view to develop their private sector? Second, what are the characteristics of reformist governments? Third, what are the effects of regulatory change on different aspects of economic or investment activity? Answering these questions adds to our knowledge of development.

With these objectives at hand, *Doing Business* measures the processes for business incorporation, getting a building permit, obtaining an electricity connection, transferring property, getting access to credit, protecting minority investors, paying taxes, engaging in international trade, enforcing contracts, and resolving insolvency. *Doing Business* also collects and publishes data on regulation of employment as well as contracting with the government (figure O.1). The employing workers indicator set measures regulation in the areas of hiring, working hours, and redundancy. The contracting with the government indicators capture the time and procedures involved in a standardized public procurement for road resurfacing. These two indicator sets do not constitute part of the ease of doing business ranking.

Research demonstrates a causal relationship between economic freedom and gross domestic product (GDP) growth, where freedom regarding wages and prices, property rights, and licensing requirements leads to economic development.[2] Of the 190 economies measured by *Doing Business 2020*, land registries in 146 lack full geographic coverage of privately owned land. All privately held land plots are formally registered in only 3% of low-income economies. Overall, on the registering property indicator set, 92 economies receive a score of zero on the geographic coverage of privately owned land index, 12 on the transparency of information index, and 31 on the reliability of infrastructure index. Globally, property registration processes remain most inefficient in the South Asia and Sub-Saharan Africa regions.

Doing Business 2020 shows that effectiveness of trading across borders also varies significantly from economy to economy. Economies that

FIGURE 0.1 What is measured in *Doing Business*?



Note: The employing workers and contracting with the government indicator sets are not included in the ease of doing business ranking.

predominantly trade through seaports incur average export border compliance costs as high as $2,223 per shipment in the Democratic Republic of Congo and $1,633 in Gabon compared to only $354 in Benin and $303 in Mauritius. Similarly, documentary compliance costs surge to $1,800 in Iraq, $725 in the Syrian Arab Republic, and $550 in The Bahamas. It is important to note, however, that high costs in Iraq and Syria are also attributed to fragile political, social, and economic conditions. Export border compliance times for maritime transport range from 10 hours in Singapore to over 200 hours in Cameroon and Côte d'Ivoire. According to *Doing Business 2020* data, ports are most efficient in Organisation for Economic Co-operation and Development (OECD) high-income economies and least efficient in Sub-Saharan Africa. Substantial further reform efforts are warranted to spread efficiency to economies where businesses still struggle to trade.

Business regulation: Benchmarking

Doing Business benchmarks aspects of business regulation and practice using specific case studies with standardized assumptions. The strength of the business environment is scored on the basis of an economy's performance in each of the 10 areas included in the ease of doing business ranking (table O.1). This approach facilitates the comparison of regulation across economies. The ease of doing business score serves as the basis for ranking economies on their business environment: the ranking is obtained by sorting the economies by their scores. The ease of doing business score shows an economy's absolute position relative to the best regulatory performance, whereas the ease of doing business ranking is an indication of an economy's position relative to that of other economies.

Doing Business 2020 acknowledges 22 reforms in the 20 top-ranking economies. Since 2003/04, the 20 best-performing economies have carried out a total of 464 regulatory changes, suggesting that even the gold

TABLE 0.1 Ease of doing business ranking

Rank	Economy	DB score	Rank	Economy	DB score	Rank	Economy	DB score
1	New Zealand	86.8	65	Puerto Rico (U.S.)	70.1	128	Barbados	57.9
2	Singapore	86.2	66	Brunei Darussalam	70.1	129	Ecuador	57.7
3	Hong Kong SAR, China	85.3	67	Colombia	70.1	130	St. Vincent and the Grenadines	57.1
4	Denmark	85.3	68	Oman	70.0	131	Nigeria	56.9
5	Korea, Rep.	84.0	69	Uzbekistan	69.9	132	Niger	56.8
6	United States	84.0	70	Vietnam	69.8	133	Honduras	56.3
7	Georgia	83.7	71	Jamaica	69.7	134	Guyana	55.5
8	United Kingdom	83.5	72	Luxembourg	69.6	135	Belize	55.5
9	Norway	82.6	73	Indonesia	69.6	136	Solomon Islands	55.3
10	Sweden	82.0	74	Costa Rica	69.2	137	Cabo Verde	55.0
11	Lithuania	81.6	75	Jordan	69.0	138	Mozambique	55.0
12	Malaysia	81.5	76	Peru	68.7	139	St. Kitts and Nevis	54.6
13	Mauritius	81.5	77	Qatar	68.7	140	Zimbabwe	54.5
14	Australia	81.2	78	Tunisia	68.7	141	Tanzania	54.5
15	Taiwan, China	80.9	79	Greece	68.4	142	Nicaragua	54.4
16	United Arab Emirates	80.9	80	Kyrgyz Republic	67.8	143	Lebanon	54.3
17	North Macedonia	80.7	81	Mongolia	67.8	144	Cambodia	53.8
18	Estonia	80.6	82	Albania	67.7	145	Palau	53.7
19	Latvia	80.3	83	Kuwait	67.4	146	Grenada	53.4
20	Finland	80.2	84	South Africa	67.0	147	Maldives	53.3
21	Thailand	80.1	85	Zambia	66.9	148	Mali	52.9
22	Germany	79.7	86	Panama	66.6	149	Benin	52.4
23	Canada	79.6	87	Botswana	66.2	150	Bolivia	51.7
24	Ireland	79.6	88	Malta	66.1	151	Burkina Faso	51.4
25	Kazakhstan	79.6	89	Bhutan	66.0	152	Mauritania	51.1
26	Iceland	79.0	90	Bosnia and Herzegovina	65.4	153	Marshall Islands	50.9
27	Austria	78.7	91	El Salvador	65.3	154	Lao PDR	50.8
28	Russian Federation	78.2	92	San Marino	64.2	155	Gambia, The	50.3
29	Japan	78.0	93	St. Lucia	63.7	156	Guinea	49.4
30	Spain	77.9	94	Nepal	63.2	157	Algeria	48.6
31	China	77.9	95	Philippines	62.8	158	Micronesia, Fed. Sts.	48.1
32	France	76.8	96	Guatemala	62.6	159	Ethiopia	48.0
33	Turkey	76.8	97	Togo	62.3	160	Comoros	47.9
34	Azerbaijan	76.7	98	Samoa	62.1	161	Madagascar	47.7
35	Israel	76.7	99	Sri Lanka	61.8	162	Suriname	47.5
36	Switzerland	76.6	100	Seychelles	61.7	163	Sierra Leone	47.5
37	Slovenia	76.5	101	Uruguay	61.5	164	Kiribati	46.9
38	Rwanda	76.5	102	Fiji	61.5	165	Myanmar	46.8
39	Portugal	76.5	103	Tonga	61.4	166	Burundi	46.8
40	Poland	76.4	104	Namibia	61.4	167	Cameroon	46.1
41	Czech Republic	76.3	105	Trinidad and Tobago	61.3	168	Bangladesh	45.0
42	Netherlands	76.1	106	Tajikistan	61.3	169	Gabon	45.0
43	Bahrain	76.0	107	Vanuatu	61.1	170		45.0
44	Serbia	75.7	108	Pakistan	61.0	171	Sudan	44.8
45	Slovak Republic	75.6	109	Malawi	60.9	172	Iraq	44.7
46	Belgium	75.0	110		60.7	173	Afghanistan	44.1
47	Armenia	74.5	111	Dominica	60.5	174	Guinea-Bissau	43.2
48	Moldova	74.4	112	Djibouti	60.5	175	Liberia	43.2
49	Belarus	74.3	113	Antigua and Barbuda	60.3	176	Syrian Arab Republic	42.0
50	Montenegro	73.8	114	Egypt, Arab Rep.	60.1	177	Angola	41.3
51	Croatia	73.6	115	Dominican Republic	60.0	178	Equatorial Guinea	41.1
52	Hungary	73.4	116	Uganda	60.0	179	Haiti	40.7
53	Morocco	73.4	117	West Bank and Gaza	60.0	180	Congo, Rep.	39.5
54	Cyprus	73.4	118	Ghana	60.0	181	Timor-Leste	39.4
55	Romania	73.3	119	Bahamas, The	59.9	182	Chad	36.9
56	Kenya	73.2	120	Papua New Guinea	59.8	183	Congo, Dem. Rep.	36.2
57	Kosovo	73.2	121	Eswatini	59.5	184	Central African Republic	35.6
58	Italy	72.9	122	Lesotho	59.4	185	South Sudan	34.6
59	Chile	72.6	123	Senegal	59.3	186	Libya	32.7
60	Mexico	72.4	124	Brazil	59.1	187	Yemen, Rep.	31.8
61	Bulgaria	72.0	125	Paraguay	59.1	188	Venezuela, RB	30.2
62	Saudi Arabia	71.6	126	Argentina	59.0	189	Eritrea	21.6
63	India	71.0	127	Iran, Islamic Rep.	58.5	190	Somalia	20.0
64	Ukraine	70.2						

Source: Doing Business database.

Note: The rankings are benchmarked to May 1, 2019, and based on the average of each economy's ease of doing business scores for the 10 topics included in the aggregate ranking. For the economies for which the data cover two cities, scores are a population-weighted average for the two cities. Rankings are calculated on the basis of the unrounded scores, while scores with only one digit are displayed in the table.

standard setters have room to improve their business climates. More than half of the economies in the top-20 cohort are from the OECD high-income group; however, the top-20 list also includes four economies from East Asia and the Pacific, two from Europe and Central Asia, as well as one from the Middle East and North Africa and one from Sub-Saharan Africa. Conversely, most economies (12) in the bottom 20 are from the Sub-Saharan Africa region.

Encouragingly, several of the lowest-ranked economies are actively reforming in pursuit of a better business environment. Over the past year, Myanmar introduced substantial improvements in five areas measured by *Doing Business*—starting a business, dealing with construction permits, registering property, protecting minority investors, and enforcing contracts. This ambitious reform program allowed the country to rise out of the bottom 20 to a ranking of 165. In contrast to the economies ranked in the top 20, however, the bottom 20 implemented only 10 reforms in 2018/19.

Economies that score highest on the ease of doing business share several common features, including the widespread use of electronic systems. All of the 20 top-ranking economies have online business incorporation processes, have electronic tax filing platforms, and allow online procedures related to property transfers. Moreover, 11 economies have electronic procedures for construction permitting. In general, the 20 top performers have sound business regulation with a high degree of transparency. The average scores of these economies are 12.2 (out of 15) on the building quality control index, 7.2 (out of 8) on the reliability of supply and transparency of tariffs index, 24.8 (out of 30) on the quality of land administration index, and 13.2 (out of 18) on the quality of judicial processes index. Fourteen of the 20 top performers have a unified collateral registry, and 14 allow a viable business to continue operating as a going concern during insolvency proceedings.

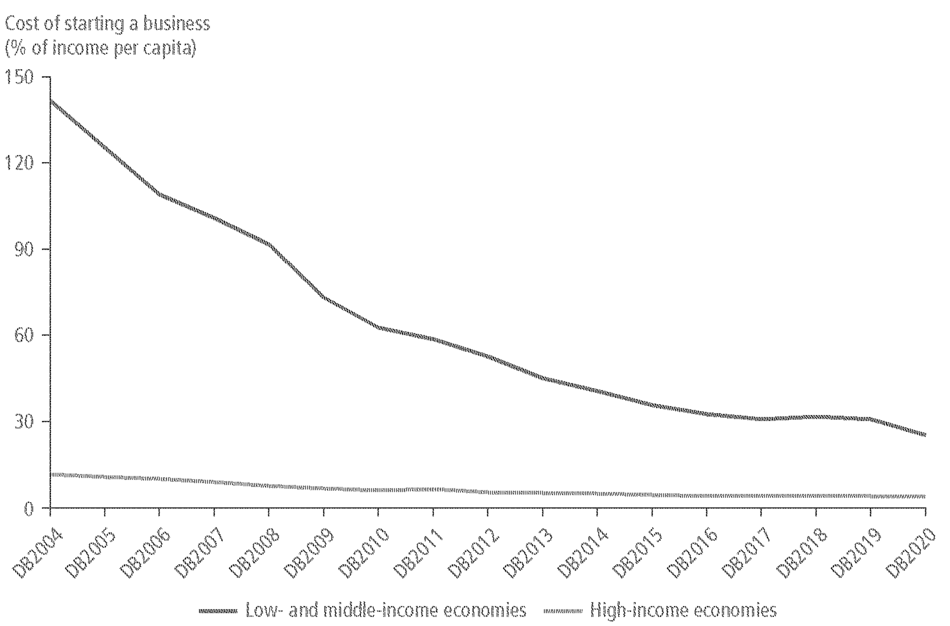
The difference in an entrepreneur's experience in top- and bottom-performing economies is discernible in almost all *Doing Business* topics. For example, it takes nearly six times longer on average to start a business in the economies ranked in the bottom 50 than it does in the top 20. Transferring property in the 20 top economies requires less than two weeks, compared to about three months in the bottom 50. Obtaining an electricity connection in an average bottom-50 economy takes twice the time that it takes in an average top-20 economy; the cost of such a connection is 44 times higher when expressed as a share of income per capita. Also, commercial dispute resolution lasts about 2.1 years in economies ranking in the bottom 50 compared to 1.1 years in the top 20. Notable differences between stronger and weaker performing economies are also evident in the quality of regulation and information. In the top 20, 83% of the adult population on average is covered by either a credit bureau or registry, whereas in the bottom 50 the average coverage is only at 10%.

What do *Doing Business 2020* data show?

When low-income economies achieve higher levels of economic efficiency, they tend to reduce the income gap with more developed ones. One study quantifies the relationship between the regulation of entry and the income gap between developing countries and the United States. It shows that substantial barriers to entry in developing economies account for almost half of the income gap with the United States.[3] These barriers prevent growth and result in persistent poverty. Encouragingly, *Doing Business 2020* continues to show a steady convergence between developing and developed economies, especially in the area of business incorporation (figure O.2). Since 2003/04, 178 economies have implemented 722 reforms captured by the starting a business indicator set, either reducing or eliminating barriers to entry. In all, 106 economies eliminated or reduced minimum capital requirements, about 80 introduced or improved one-stop shops, and more than 160 simplified preregistration and registration formalities. More remains to be done, however.

Despite this convergence, *Doing Business 2020* data suggest that a considerable disparity persists between low- and high-income economies on the ease of starting a business. An entrepreneur in a low-income economy typically spends about 50.0% of income per capita to launch a company, compared to just 4.2% for an entrepreneur in a high-income economy.

FIGURE O.2 The cost of starting a business has fallen over time in developing economies



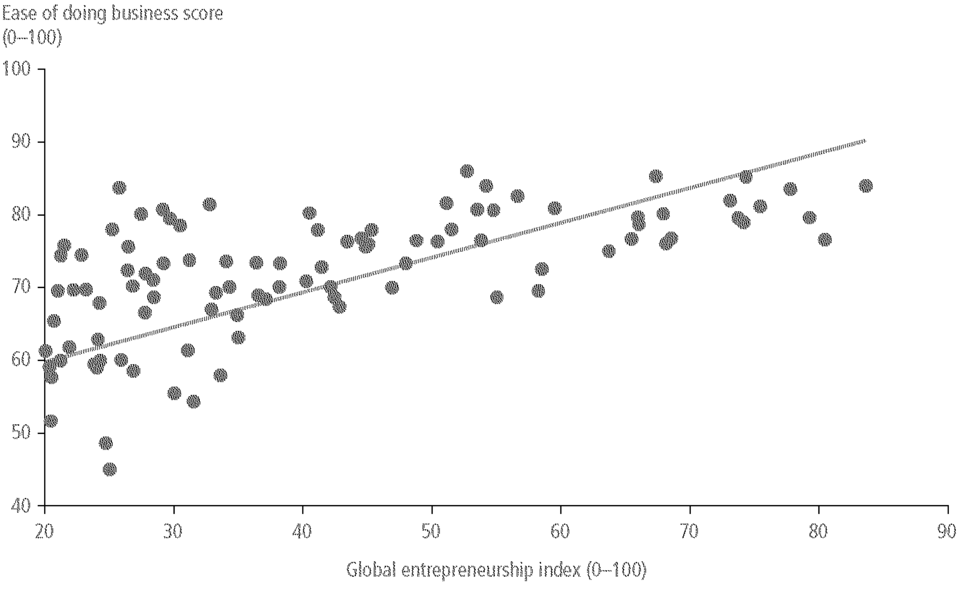
Source: Doing Business database.
Note: The sample comprises 145 economies.

Moreover, the convergence trend does not hold for minimum capital requirements. About one-third of low- and lower-middle-income economies require businesses to set aside a certain amount of minimum capital in addition to regular company incorporation costs. Similarly, the minimum capital requirement is prevalent in one-third of high-income economies.[4]

Ample room still exists for closing the gap between developed and developing economies on most of the *Doing Business* indicators. Performance on the strength of legal rights index, captured by the getting credit indicator set, is weakest among low- and middle-income economies. Credit registries and bureaus in developing economies also tend to collect less comprehensive information with comparatively low coverage, thereby limiting businesses' access to credit. The average credit registry coverage of the adult population in low-income economies is less than 3%, compared to over 22% in high-income ones. Similarly, the average time to meet tax filing obligations is significantly higher in low-income economies (275 hours) than in high-income ones (149 hours). The regions with the most cumbersome tax compliance processes remain Latin America and the Caribbean and Sub-Saharan Africa.

Economies that score well in *Doing Business* benefit from higher levels of entrepreneurial activity (figure O.3). Increased entrepreneurship generates better employment opportunities, higher government tax revenues, and improved personal incomes.

FIGURE O.3 Greater ease of doing business is associated with higher levels of entrepreneurship



Sources: Doing Business database; Global Entrepreneurship and Development Institute.
Note: The relationship is significant at the 1% level after controlling for income per capita. The sample comprises 135 economies.

Although *Doing Business* does not capture corruption and bribery directly, inefficient regulation tends to go hand in hand with rent-seeking. There are ample opportunities for corruption in economies where excessive red tape and extensive interactions between private sector actors and regulatory agencies are necessary to get things done. The 20 worst-scoring economies on Transparency International's Corruption Perceptions Index average 8 procedures to start a business and 15 to obtain a building permit.[5] Conversely, the 20 best-performing economies complete the same formalities with 4 and 11 steps, respectively. Moreover, economies that have adopted electronic means of compliance with regulatory requirements—such as obtaining licenses and paying taxes—experience a lower incidence of bribery.

Reforming for economic advancement

Doing Business acknowledges the 10 economies that improved the most on the ease of doing business after implementing regulatory reforms.[6] In *Doing Business 2020*, the 10 top improvers are Saudi Arabia, Jordan, Togo, Bahrain, Tajikistan, Pakistan, Kuwait, China, India, and Nigeria (table O.2). These economies implemented a total of 59 regulatory reforms in 2018/19—accounting for one-fifth of all the reforms recorded worldwide. Their efforts focused primarily on the areas of starting a business, dealing with construction permits, and trading across borders.

TABLE O.2 The 10 economies improving the most across three or more areas measured by *Doing Business* in 2018/19

			Reforms making it easier to do business									
Economy	Rank	Change in DB score	Starting a business	Dealing with construction permits	Getting electricity	Registering property	Getting credit	Protecting minority investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency
Saudi Arabia	62	7.7	✔	✔	✔		✔	✔		✔	✔	✔
Jordan	75	7.6					✔		✔			✔
Togo	97	7.0	✔	✔	✔	✔	✔					
Bahrain	43	5.9		✔	✔	✔	✔	✔	✔	✔	✔	✔
Tajikistan	106	5.7	✔				✔			✔		
Pakistan	108	5.6	✔	✔	✔	✔			✔	✔		
Kuwait	83	4.7	✔	✔	✔	✔	✔	✔		✔		
China	31	4.0	✔	✔	✔			✔	✔	✔	✔	✔
India	63	3.5	✔	✔						✔		✔
Nigeria	131	3.4	✔	✔	✔	✔				✔	✔	

Source: Doing Business database.
Note: See endnote 6 for details on how the top 10 improved economies are assessed.

Jordan and Kuwait are new additions to the list of 10 most improved economies. Nigeria appears as one of the top-10 improvers for the second time. India, which has conducted a remarkable reform effort, joins the list for the third year in a row. Previously, only Burundi, Colombia, the Arab Republic of Egypt, and Georgia featured on the list of 10 top improvers for three consecutive *Doing Business* cycles. Given the size of India's economy, these reform efforts are particularly commendable.

Bahrain implemented the highest number of regulatory reforms (nine), improving in almost every area measured by *Doing Business*.[7] China and Saudi Arabia follow Bahrain with eight reforms each.

One may wonder what underlying factors drive economies to reform. The drivers can be either political or economic or both. The economic advancement of neighboring countries is also an important motivational factor. Research on the effects of market-liberalizing reforms in 144 economies over the period 1995–2006 finds that the most important factor in transmitting reforms between countries is their geographical and cultural proximity. The spillover effect is magnified when more countries adopt reforms that boost economic development. Furthermore, mass media coverage affects political decisions. A recent study finds that economies with higher media coverage of *Doing Business* tend to carry out more business regulatory reforms, with one- and two-year lags between media coverage and reform implementation.[8]

Business regulatory reforms across the Gulf economies have been on a steady rise. These changes are motivated in part by the urgent need for economic diversification. Successful reforms in neighboring states, such as the United Arab Emirates, have also served as inspiration. Saudi Arabia is the most improved economy in *Doing Business 2020*, with a total of eight reforms. With a reformist mindset, the crown prince has implemented and promoted a policy of featuring the Kingdom as an open world-class investment destination. The Kingdom's "Vision 2030" plan for long-term development encompasses a variety of legal and structural reforms.

Pakistan, another top improver, developed an ambitious reform strategy, setting up a national secretariat as well as a prime minister's reform steering committee to ensure progress. Most of the programmed reforms evolved around the *Doing Business* indicators. *Doing Business* working groups have been set up at both municipal and provincial levels.

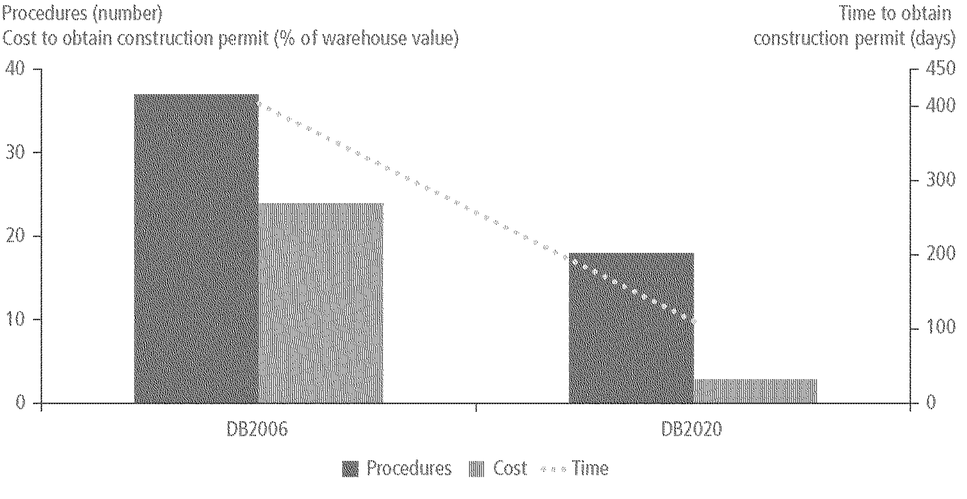
The motivation for reform in Nigeria, Tajikistan, and Togo was in part the developmental achievements of their neighbors. Rwanda's progress over the past 10 years inspired authorities in Togo, leading several Togolese delegations to visit Kigali to learn about successful reforms. Togo's president set a goal to be number one in West Africa in *Doing Business 2020*. To achieve this target, Togo made significant reform efforts in the areas of starting a business, registering property, and getting credit. Similarly, after observing an economic transformation in neighboring Uzbekistan, Tajikistan's president took a special interest in improving the country's ranking on the ease of doing business.

Nigeria has embarked on a comprehensive reform journey following the example of Kenya.

As in other economies on the list of 10 top improvers, leaders of India and China adopted the *Doing Business* indicators as a core component of their reform strategies. Prime Minister Narendra Modi's "Make in India" campaign focused on attracting foreign investment, boosting the private sector—manufacturing in particular—and enhancing the country's overall competitiveness. The government turned to the *Doing Business* indicators to show investors India's commitment to reform and to demonstrate tangible progress. In 2015 the government's goal was to join the 50 top economies on the ease of doing business ranking by 2020. The administration's reform efforts targeted all of the areas measured by *Doing Business*, with a focus on paying taxes, trading across borders, and resolving insolvency. The country has made a substantial leap upward, raising its ease of doing business ranking from 130 in *Doing Business 2016* to 63 in *Doing Business 2020*.

In recent years China has shown eagerness to reform in the areas captured by *Doing Business*. Chinese Premier Li Keqiang's March 2018 "Report on the Work of the Government" set the stage for municipal governments to implement a reform agenda. The use of *Doing Business* as a benchmark aligns with the central government's ambition to improve the competitiveness of the Chinese economy. The Chinese government also created working groups targeting each of the *Doing Business* indicators. To date, China has shown a notable improvement in the areas of dealing with construction permits (figure O.4), getting electricity, and resolving insolvency.

FIGURE O.4 China has substantially improved the process to obtain a construction permit



Source: Doing Business database.

What have economies achieved, and who falls behind?

In 2018/19, 115 economies implemented 294 business regulatory reforms across the 10 areas measured by *Doing Business*. Most of these reforms addressed aspects of starting a business, dealing with construction permits, getting electricity, and paying taxes; the least reformed area was resolving insolvency. The most common reform features included advancing the functionality of credit bureaus and registries, developing or enhancing online platforms to comply with regulatory requirements, improving the reliability of power supply, reducing certain taxes, strengthening minority investor protections, streamlining property registration processes, and automating international trade logistics. Low-income economies accounted for 11% of all the regulatory changes, with Togo implementing the highest number of reforms (five).

In Sub-Saharan Africa, Togo represents a bright spot. Sub-Saharan Africa remains one of the weak-performing regions on the ease of doing business with an average score of 51.8, well below the OECD high-income economy average of 78.4 and the global average of 63.0. Compared to the previous year, Sub-Saharan African economies raised their average ease of doing business score by just 1 percentage point in *Doing Business 2020*, whereas economies in the Middle East and North Africa region raised their average score by 1.9.

Latin America and the Caribbean also lags in terms of reform implementation and impact. No economies from this region appeared in the 10 top improvers list over the past two years. Moreover, not a single economy in Latin America and the Caribbean ranks among the top 50 on the ease of doing business. The regional leader on the ease of doing business score, Mexico, is still almost 12 percentage points below the average score of the 10 top-ranking economies.

Globally reforms in the areas of dealing with construction permits and getting electricity have risen sharply in recent years, peaking in 2018/19 at 37 and 34, respectively. Twenty-one of the 37 economies reforming aspects of dealing with construction permits simplified the permitting processes by streamlining interactions with agencies for preapprovals and inspections. Another 16 reformed their building quality control systems. In addition, 12 economies either set up or improved online platforms for processing building permits, and 3 economies launched one-stop shops.

In the area of getting electricity, several Caribbean countries, including Barbados and Belize, invested in training utility personnel and capacity building. In West Africa, Ghana and Nigeria reduced electricity connection times. Sixteen economies made substantial investments in modernizing electric infrastructure through the installation of substations and remote-control systems; others improved distribution network maintenance. Mainly owing to targeted improvements in electricity supply, the average global duration of power cuts fell by 8.3% between 2017 and 2018. Although blackouts remain relatively frequent in Sub-Saharan Africa,

utilities in this region made substantial progress in providing a better power supply to their customers.

In 2018/19, 24 economies increased the efficiency of property transfers and improved the quality of land administration. The most common features of property registration reform included greater transparency of information, better reliability of infrastructure, and reduced taxes and fees. Across regions, economies in the Middle East and North Africa improved the most. Qatar created a one-stop shop, eliminating five procedures and lowering property transfer time by 11 days. In Latin America and the Caribbean, Jamaica reduced the cost of property registration by almost 7% of the property value. Brazil and Ecuador introduced electronic property transfer systems.

Thirty economies pursued reforms facilitating firms' access to credit. Five reformers either created unified and functional systems for secured transactions or expanded the scope of movable assets that can be used as collateral. Djibouti, Jordan, and Tajikistan launched geographically centralized, unified, and notice-based collateral registries in 2018/19. Moreover, Jordan, Kenya, and Tajikistan introduced online features to their existing registries. Twenty-three economies implemented reforms improving credit information systems. One of the most common features of reform was the expansion of coverage of individuals and firms in credit registries or bureaus. Six developing countries carried out this type of reform. Niger, Senegal, and Togo, for example, passed laws allowing the credit bureau, Creditinfo VoLo, to collect broader historical data. With more credit data and data from alternative sources, these three economies were able to boost coverage rates.

For the ninth year in a row, the most common feature of reforms in paying taxes is the implementation or enhancement of electronic filing and payment systems. Seventeen economies carried out such reforms in calendar year 2018. In terms of digitization, the most notable progress since *Doing Business 2006* has been achieved in Europe and Central Asia. Today taxes can be filed electronically in 22 economies in this region, compared to only 4 in 2004.

Economies across all regions reformed aspects of international trade logistics in 2018/19, with 25 making it easier to move goods across borders. More than 40% of the reforms captured by the trading across borders indicators were in low- and lower-middle-income economies. Overall, South Asia was the region with the highest share of economies implementing trade reforms in *Doing Business 2020*. Trade reforms demonstrate the importance of cross-border cooperation in ensuring easy customs clearance procedures, harmonization of compliance rules, and border control efficiency. Nepal, for example, decreased the time to export and import by opening a new joint border crossing point with India.

In the area of contract enforcement, eight economies provided more straightforward options—outside of ordinary courts or procedures—for resolving legal disputes. Mauritania and Moldova, for example, implemented fast-track procedures as an effective way to resolve small-value disputes. Three economies in Latin America and the Caribbean adopted

techniques intended to ensure a timely and organized flow of cases through the court system. Jamaica started publishing court performance reports, Costa Rica introduced a pretrial conference, and Paraguay implemented an electronic case management system.

Thirteen economies implemented reforms making it easier to resolve insolvency. A characteristic feature of these reforms was the introduction of a reorganization procedure. Keeping viable businesses afloat is one of the most important objectives of bankruptcy systems. The highest recovery rates are recorded in economies where reorganization is the most common insolvency proceeding for viable businesses in financial distress. Bahrain, Jordan, and Saudi Arabia all introduced reorganization proceedings, completely overhauling their previous insolvency frameworks.

Eleven economies made changes to employment regulations. The OECD high-income group recorded the highest share of reforms, with work scheduling being the most common feature. Austria increased overtime to 60 hours per week, and Hungary raised its overtime allowance to 400 hours per calendar year, making employment regulation more business-friendly. Conversely, the Slovak Republic increased wage premiums for work on weekly rest days and at night. North Macedonia reduced the length of the probationary period (to four months from six), introduced priority rules in the case of both redundancy dismissals and reemployment, and increased severance payments.

When doing business is not easy

Not all regulatory changes make it easier for entrepreneurs to do business. In 2018/19, 26 economies introduced 31 reforms that stifled efficiency. Some changes are a conscious trade-off. Croatia's credit bureau, for example, stopped distributing data on individuals while it gauges the full extent of the European Union General Data Protection Regulation. In the area of protecting minority investors, Belarus extended the deadline for companies to inform the market of related-party transactions. This change makes it easier for firms to comply with regulation but increases information asymmetry, which could be harmful to investors. Political changes also play a role. In Sudan, the new majority in the National Assembly did not endorse temporary amendments to the Companies Act. As a result, a lapse in the provisions adversely affected Sudan's performance on the indicators for getting credit, protecting minority investors, and resolving insolvency.

Increased regulatory costs faced by the private sector serve as another foundation for changes making it more difficult to do business, as evident in 16 of the 31 cases. Increasing the cost to do business can be counterproductive. Studies show that higher business start-up costs adversely affect the number of new market entrants.[9] Firms that never incorporate because of prohibitive expenses represent a compounding net loss of public revenue. In other cases, the administrative costs associated with enacting

comparatively minor fee increases may not even be covered by slightly increased revenues. For example, Cambodia increased costs associated with registration with the Ministry of Labor and Vocational Training. Mexico (Mexico City) increased the fees for obtaining a building permit. The Bahamas increased the stamp duty for property transfers while Nepal hiked up the registration fee to transfer properties.

Insufficient reform follow-through, as in several economies, is another reason for a deterioration in the business climate. Morocco, for instance, stopped publishing statistics on the number of property transactions and land disputes. And Belarus weakened minority investor protections by no longer requiring immediate public disclosure of related-party transactions. Some reforms are relatively easy to initiate; however, without proper upkeep, their benefits can fail to materialize.

Finally, design and implementation issues undermine reform efforts. Changing the agency in charge of property registration in Kazakhstan had the potential to improve service delivery. Because the new entity was not authorized to collect state duties, however, users had to make some payments at a different location. Mali made paying taxes more difficult by introducing a new tax—the solidarity contribution—which is an additional cost on businesses imposed on turnover. Barbados rendered property transfers less efficient by increasing the time to record the conveyance at the Land Registry as well as pay transfer fees and stamp duties.

What is new in this year's study?

Doing Business 2020 features three case studies—on business regulatory reforms across four indicator sets (starting a business, getting credit, paying taxes, and resolving insolvency), on contracting with the government, and on employing workers. The case study on reforms analyzes prominent regulatory changes implemented by governments since the inception of *Doing Business*. Among the most common regulatory changes over the past 17 years are simplifying the requirements to start a company, easing tax compliance burdens, increasing access to credit, and ensuring the survival of viable businesses. The case study also discusses the effects of regulatory changes on various dimensions of economic development and investment activity.

The contracting with the government case study measures the efficiency of public procurement. The case study describes a standardized scenario benchmarked by the indicator set and outlines a preliminary description of the methodology. Worldwide, public procurement accounts for 10–25% of GDP on average, and cumulatively governments spend $10 trillion on public contracts every year. The efficiency of the process varies considerably, however; currently, there are no global data to benchmark such practices. The contracting with the government database constitutes a repository of comparable data on how procurement processes are carried out. This indicator set, which has been under development for the past three years, will be included in the ease of doing business score in *Doing Business 2021*.

The case study on employing workers highlights the positive effects of flexible employment regulation for firms, which in turn affects job creation and productivity growth. It analyzes the advantages of operating under a less rigid hiring framework that, for example, permits fixed-term contracts. In light of the changing dynamics of work, the case study further examines the benefits of flexible rules on working hours. It shows that restrictions on dismissal due to redundancy hurt firms as well as youth employment. *Doing Business 2020* also includes a literature review chapter on relevant research articles published in top-ranking economic journals since 2013.

Notes

1. Djankov 2016.
2. Heckelman 2000.
3. Herrendorf and Teixeira 2011.
4. The figure excludes seven economies with a minimum capital requirement of less than $5.
5. Transparency International database. A higher score on the Corruption Perceptions Index indicates a lower level of perceived corruption.
6. Economies are selected on the basis of the number of reforms and ranked on how much their ease of doing business score improved. First, *Doing Business* selects the economies that implemented reforms making it easier to do business in 3 or more of the 10 areas included in this year's aggregate ease of doing business score. Regulatory changes making it more difficult to do business are subtracted from the number of those making it easier. Second, *Doing Business* ranks these economies on the increase in their ease of doing business score due to reforms from the previous year (the impact due to changes in income per capita and the lending rate is excluded). The improvement in their score is calculated not by using the data published in 2018 but by using comparable data that capture data revisions and methodology changes when applicable. The choice of the most improved economies is determined by the largest improvements in the ease of doing business score among those with at least three reforms. The order of economies is based on the difference of unrounded scores.
7. Considering the areas that constitute the ease of doing business ranking.
8. Ramalho and Saltane 2019.
9. Djankov and others 2002; Klapper, Laeven, and Rajan 2006.

CHAPTER 1

About *Doing Business*

- *Doing Business* measures aspects of business regulation affecting small domestic firms located in the largest business city of 190 economies. In addition, for 11 economies a second city is covered.

- *Doing Business* covers 12 areas of business regulation. Ten of these areas—starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency—are included in the ease of doing business score and ease of doing business ranking. *Doing Business* also measures regulation on employing workers and contracting with the government, which are not included in the ease of doing business score and ranking.

- More than 48,000 professionals in 190 economies have assisted in providing the data that inform the *Doing Business* indicators.

Doing Business is founded on the principle that economic activity benefits from clear rules: rules that allow voluntary exchanges between economic actors, set out strong property rights, facilitate the resolution of commercial disputes, and provide contractual partners with protections against arbitrariness and abuse. Such rules are much more effective in promoting growth and development when they are efficient, transparent, and accessible to those for whom they are intended.

Rules create an environment where new entrants with drive and innovative ideas can get started in business and where productive firms can invest, expand, and create new jobs. The role of government policy in the daily operations of small and medium-size domestic firms is a central focus of the *Doing Business* data. The objective is to encourage regulation that is efficient, transparent, and easy to implement so that businesses can thrive. *Doing Business* data focus on 12 areas of regulation affecting small and medium-size domestic firms in the largest business city of an economy. The project uses standardized case studies to provide objective, quantitative measures that can be compared across 190 economies.

What *Doing Business* measures

Doing Business captures several important dimensions of the regulatory environment affecting domestic firms. It provides quantitative indicators on regulation for starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency (table 1.1). *Doing Business* also measures aspects of employing workers and contracting with the government (public procurement), which are not included in the ranking.

How the indicators are selected

The design of the *Doing Business* indicators has been informed by theoretical insights gleaned from extensive research.[1] In addition, background papers developing the methodology for most of the *Doing Business* indicator sets have established the importance of the rules and regulations that *Doing Business* measures for economic outcomes such as trade volumes, foreign direct investment, market capitalization in stock exchanges, and private credit as a percentage of GDP.[2]

Some *Doing Business* indicators give a higher score for more regulation and better-functioning institutions (such as courts or credit bureaus). Higher scores are given for stricter disclosure requirements for related-party transactions, for example, in the area of protecting minority investors. Higher scores are also given for a simplified way of applying regulation that keeps compliance costs for firms low—such as by easing the burden of business start-up formalities with a one-stop shop or through a single online portal. Finally, the scores reward economies that apply a risk-based approach to regulation as a way to address social and environmental concerns—such

TABLE 1.1 What *Doing Business* measures—12 areas of business regulation

Indicator set	What is measured
Starting a business	Procedures, time, cost, and paid-in minimum capital to start a limited liability company for men and women
Dealing with construction permits	Procedures, time, and cost to complete all formalities to build a warehouse and the quality control and safety mechanisms in the construction permitting system
Getting electricity	Procedures, time, and cost to get connected to the electrical grid; the reliability of the electricity supply; and the transparency of tariffs
Registering property	Procedures, time, and cost to transfer a property and the quality of the land administration system for men and women
Getting credit	Movable collateral laws and credit information systems
Protecting minority investors	Minority shareholders' rights in related-party transactions and in corporate governance
Paying taxes	Payments, time, and total tax and contribution rate for a firm to comply with all tax regulations as well as postfiling processes
Trading across borders	Time and cost to export the product of comparative advantage and to import auto parts
Enforcing contracts	Time and cost to resolve a commercial dispute and the quality of judicial processes for men and women
Resolving insolvency	Time, cost, outcome, and recovery rate for a commercial insolvency and the strength of the legal framework for insolvency
Employing workers	Flexibility in employment regulation
Contracting with the government	Procedures and time to participate in and win a works contract through public procurement and the public procurement regulatory framework

Note: The employing workers and contracting with the government indicator sets are not part of the ease of doing business ranking in *Doing Business 2020*.

as by placing a greater regulatory burden on activities that pose a high risk to the population and a lesser one on lower-risk activities. Thus, the economies that rank highest on the ease of doing business are not those where there is no regulation, but those where governments have managed to create rules that facilitate interactions in the marketplace without needlessly hindering the development of the private sector.

Doing Business 2020 does not introduce any new metrics. The assumptions of the protecting minority investors indicator set, however, refocused on corporate governance for listed companies so that, if an economy does not have an active stock exchange with at least 10 listings that are not state-owned, no points are given under the extent of shareholder governance index. Economies are assessed on the same practices as before.

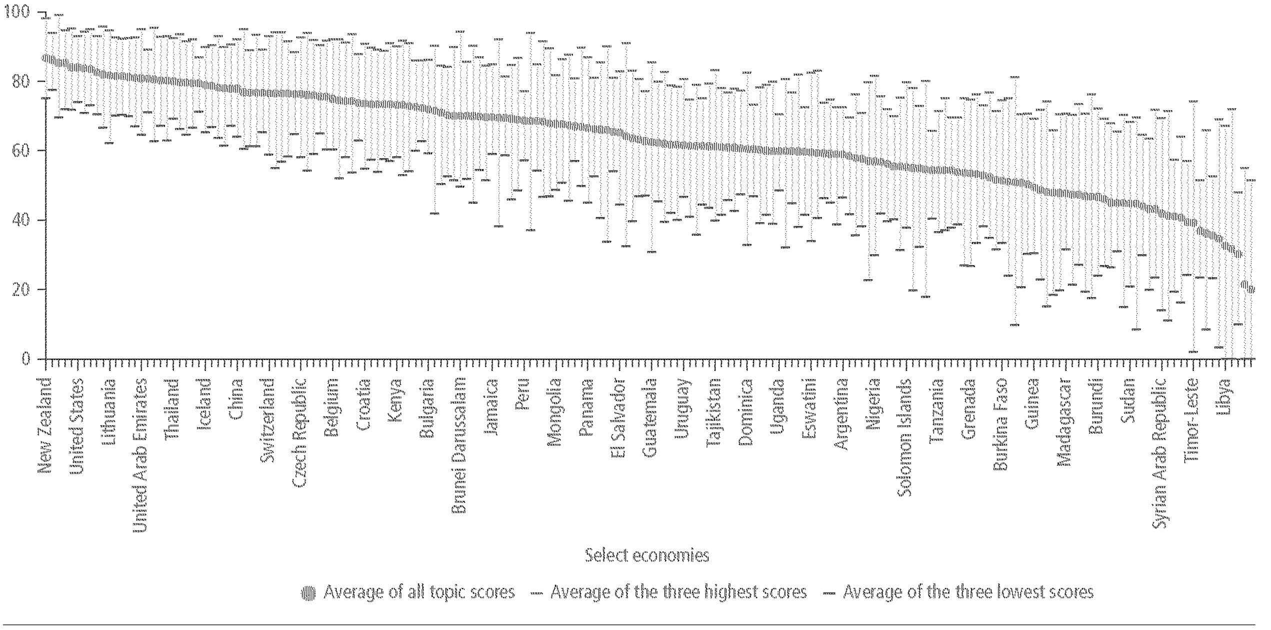
The ease of doing business score and ease of doing business ranking

To provide different perspectives on the data, *Doing Business* presents data both for individual indicators and for two aggregate measures: the ease of doing business score and the ease of doing business ranking. The ease of doing business score aids in assessing the absolute level of regulatory performance and how it improves over time. The individual indicator scores show the distance of each economy from the best regulatory performance observed in each of the indicators across all economies in the *Doing Business* sample since 2005 or the third year in which data were collected for the indicator. The best regulatory performance is set at the highest possible value for indicators calculated as scores, such as the strength of legal rights

index or the quality of land administration index. This approach underscores the gap between a particular economy's performance and the best regulatory performance at any time and is used to assess the absolute change in the economy's regulatory environment over time as measured by *Doing Business* (see chapter 7 on the ease of doing business score and ease of doing business ranking). The ranking on the ease of doing business complements the ease of doing business score by providing information about an economy's performance in business regulation relative to the performance of other economies as measured by *Doing Business*.

Doing Business uses a simple averaging approach for weighting component indicators, calculating rankings, and determining the ease of doing business score.[3] Each topic covered by *Doing Business* relates to a different aspect of the business regulatory environment. The scores and rankings of each economy vary considerably across topics, indicating that a strong performance by an economy in one area of regulation can coexist with weak performance in another (figure 1.1). One way to assess the variability of an economy's regulatory performance is to look at its scores across topics. Panama, for example, has an overall ease of doing business score of 66.6, meaning that it is about two-thirds of the way up the range from the worst to the best performance. It scores highly at 92.0 on starting a business,

FIGURE 1.1 An economy's regulatory environment may be more business-friendly in some areas than in others



Source: Doing Business database.

Note: The scores reflected are those for the 10 *Doing Business* topics included in this year's aggregate ease of doing business score. The figure is illustrative only; it does not include all 190 economies covered by *Doing Business 2020*. See the *Doing Business* website for the scores for each *Doing Business* topic for all economies.

85.5 on trading across borders, and 83.5 on getting electricity. At the same time, it has a score of 49.0 for enforcing contracts, 46.7 for paying taxes, and 39.5 for resolving insolvency.

Advantages and limitations of the methodology

The *Doing Business* methodology is designed to be an easily replicable way to benchmark specific characteristics of business regulation—how they are implemented by governments and experienced by private firms on the ground. Its advantages and limitations should be understood when using the data.

Ensuring comparability of the data across a global set of economies is a central consideration for the *Doing Business* indicators, which are developed using standardized case scenarios with specific assumptions. One such assumption is the location of a standardized business—the subject of the *Doing Business* case study—in the largest business city of the economy. The reality is that business regulations and their enforcement may differ within a country, particularly in federal states and large economies. Gathering data for every relevant jurisdiction in each of the 190 economies covered by *Doing Business* is infeasible. Nevertheless, where policy makers are interested in generating data at the local level, beyond the largest business city, and learning from local good practices, *Doing Business* has complemented its global indicators with subnational studies. Also, starting with *Doing Business 2015*, coverage was extended to the second-largest city in economies with a population of more than 100 million (as of 2013).

Doing Business recognizes the limitations of the standardized case scenarios and assumptions. Although such assumptions come at the expense of generality, they also ensure the comparability of data. Some *Doing Business* topics are complex, so it is important that the standardized cases are defined carefully. For example, the standardized case scenario usually involves a limited liability company or its legal equivalent. There are two reasons for this assumption. First, private limited liability companies are the most prevalent business form (for firms with more than one owner) in many economies around the world. Second, this choice reflects the focus of *Doing Business* on expanding opportunities for entrepreneurship: investors are encouraged to venture into business when potential losses are limited to their capital participation.

Another assumption underlying the *Doing Business* indicators is that entrepreneurs have knowledge of and comply with applicable regulations. In practice, entrepreneurs may not be aware of what needs to be done or how to comply with regulations and may lose considerable time trying to find out. Alternatively, they may intentionally avoid compliance—by not registering for social security, for example. Firms may opt for bribery and other informal arrangements intended to bypass the rules where regulation is particularly onerous. Levels of informality tend to be

higher in economies with especially burdensome regulation. Compared with their formal sector counterparts, firms in the informal sector typically grow more slowly, have poorer access to credit, and employ fewer workers—and these workers remain outside the protections of labor law and, more generally, other legal protections embedded in the law.[4] Firms in the informal sector are also less likely to pay taxes. *Doing Business* measures one set of factors that help explain the occurrence of informality, and it provides policy makers with insights into potential areas of regulatory reform.

Many important policy areas are not covered by *Doing Business*; even within the areas it measures, the scope is narrow. *Doing Business* does not measure the full range of factors, policies, and institutions that affect the quality of an economy's business environment or its national competitiveness. It does not, for example, capture aspects of macroeconomic stability, development of the financial system, market size, the incidence of bribery and corruption, or the quality of the labor force.

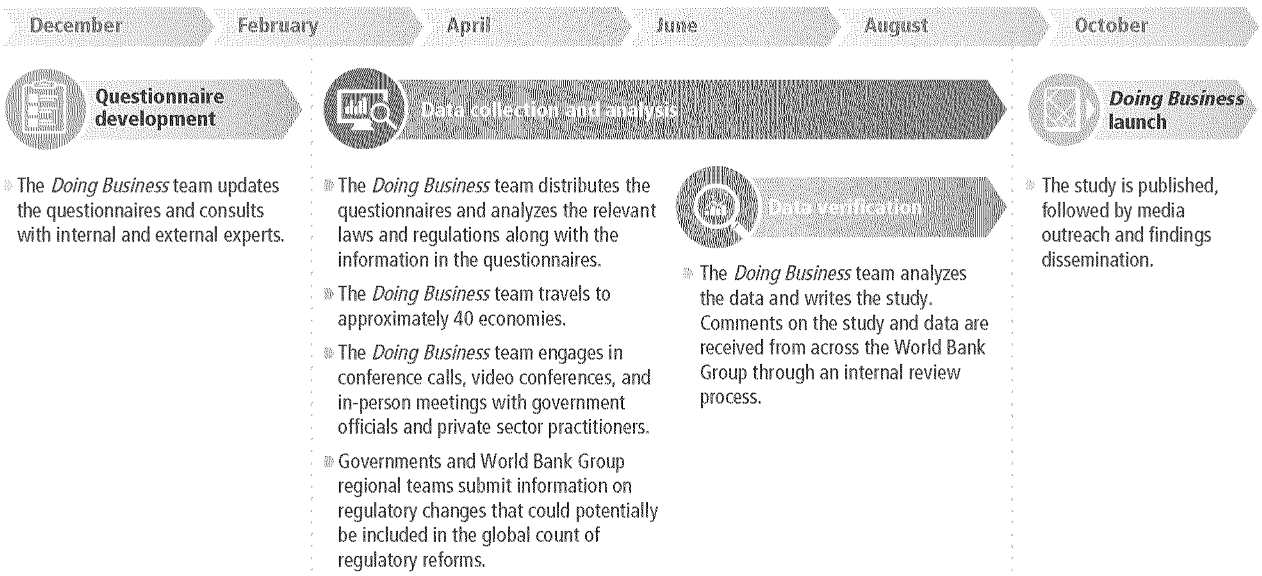
Data collection in practice

The *Doing Business* data are based on a detailed reading of domestic laws, regulations, and administrative requirements as well as their implementation in practice as experienced by private professionals. The study covers 190 economies—including some of the smallest and poorest economies, for which other sources provide little or no data. The data are collected through several rounds of communication with expert respondents (both private sector practitioners and government officials), through responses to questionnaires, conference calls, written correspondence, and visits by the team. *Doing Business* relies on four main sources of information: the relevant laws and regulations, *Doing Business* respondents, the governments of the economies covered, and the World Bank Group regional staff (figure 1.2). For a detailed explanation of the *Doing Business* methodology, see the data notes at www.doingbusiness.org.

Relevant laws and regulations

The *Doing Business* indicators are based mostly on laws and regulations: approximately two-thirds of the data embedded in the *Doing Business* indicators are based on a reading of the law. In addition to filling out questionnaires, *Doing Business* respondents submit references to the relevant laws, regulations, and fee schedules. The *Doing Business* team collects the texts of the relevant laws and regulations and checks the questionnaire responses for accuracy. The team examines the civil procedure code, for example, to check the maximum number of adjournments in a commercial court dispute, and reads the insolvency code to identify if the debtor can initiate liquidation or reorganization proceedings. Because the data collection process involves an annual update of an established database, having a very large sample of respondents is not strictly necessary. In principle,

FIGURE 1.2 How *Doing Business* collects and verifies the data



the role of the contributors is largely advisory—helping the *Doing Business* team to locate and understand the laws and regulations. There are quickly diminishing returns to an expanded pool of contributors. This notwithstanding, the number of contributors rose by 80% between 2010 and 2019.

Extensive consultations with multiple contributors are conducted by the team to minimize measurement errors for the rest of the data. For some indicators—for example, those on dealing with construction permits, enforcing contracts, and resolving insolvency—the time component and part of the cost component (where fee schedules are lacking) are based on actual practice rather than the law on the books. This approach introduces a degree of judgment by respondents on what actual practice looks like. When respondents disagree, the time indicators reported by *Doing Business* represent the median values of several responses given under the assumptions of the standardized case.

Doing Business respondents

More than 48,000 professionals in 190 economies have assisted in providing the data that inform the *Doing Business* indicators over the past 17 years.[5] *Doing Business 2020* draws on the inputs of more than 15,000 professionals.[6] The *Doing Business* website shows the number of respondents for each economy and each indicator set.

Selected on the basis of their expertise in these areas, respondents are professionals who routinely administer or advise on the legal and regulatory requirements in the specific areas covered by *Doing Business*. Because of the focus on legal and regulatory arrangements, most of the respondents are legal professionals such as lawyers, judges, or notaries.

In addition, officials of the credit bureau or registry complete the credit information questionnaire. Accountants, architects, engineers, freight forwarders, and other professionals answer the questionnaires related to paying taxes, dealing with construction permits, trading across borders, and getting electricity. Certain public officials (such as registrars from the company or property registry) also provide information that is incorporated into the indicators.

The *Doing Business* approach is to work with legal practitioners or other professionals who regularly undertake the transactions involved. Following the standard methodological approach for time-and-motion studies, *Doing Business* breaks down each process or transaction, such as starting a business or registering a property into separate steps to ensure a better estimate of time. The time estimate for each step is given by practitioners who have significant and routine experience in the transaction.

Governments and World Bank Group regional staff

After receiving the completed questionnaires from the *Doing Business* respondents, verifying the information against the law, and conducting follow-up inquiries to ensure that all relevant information is captured, the *Doing Business* team sends the regulatory reform descriptions to the World Bank Group's Board of Executive Directors and World Bank Group Country Management Units in different regions, which then inform the respective governments about the reforms identified in their economies. Through this process, government authorities and World Bank Group staff working on the economies covered by *Doing Business* can alert the *Doing Business* team about, for example, regulatory reforms not reported by the respondents or additional achievements of regulatory reforms. In addition, the team responds formally to the comments of governments or regional staff and provides explanations of the scoring decisions.

Data adjustments

Information on data corrections is provided in the data notes available at the *Doing Business* website. A transparent complaint procedure allows anyone to challenge the data. From November 2018 to October 2019, the team received and responded to 150 queries on the data.

Uses of the *Doing Business* data

Doing Business was designed with two main types of users in mind: policy makers and researchers. It is a tool that governments can use to design sound business regulatory policies. Nevertheless, the *Doing Business* data are limited in scope and should be complemented with other sources of information. *Doing Business* focuses on a few specific rules relevant to the case studies analyzed. These rules and case studies are chosen to be illustrative of the business regulatory environment, but they do not constitute a comprehensive description of that environment. By providing a unique dataset that enables analysis aimed at better understanding the role of business

regulation in economic development, *Doing Business* is also an important source of information for researchers.

Governments and policy makers

Doing Business offers policy makers a benchmarking tool useful in stimulating policy debate, both by exposing potential challenges and by identifying good practices and lessons learned. Despite the narrow focus of the indicators, the initial debate in an economy on the results they highlight typically turns into a deeper discussion on areas where business regulatory reform is needed, including areas well beyond those measured by *Doing Business*. In economies where subnational studies are conducted, the *Doing Business* indicators go one step further in offering policy makers a tool to identify good practices that can be adopted within their economies.

The *Doing Business* indicators are "actionable." For example, governments set the minimum capital requirement for new firms, invest in company and property registries to increase their efficiency, or improve the efficiency of tax administration by adopting the latest technology to facilitate the preparation, filing, and payment of taxes by the business community. Governments also undertake court reforms to shorten delays in the enforcement of contracts. Some *Doing Business* indicators, however, capture procedures, time, and costs that involve private sector participants, such as lawyers, notaries, architects, electricians, or freight forwarders. Governments have little influence in the short run over the fees these professions charge, though much can be achieved by strengthening professional licensing regimes and preventing anticompetitive behavior. In addition, governments have no control over the geographic location of their economy, a factor that can adversely affect businesses.

Over the past decade governments have increasingly turned to *Doing Business* as a repository of actionable, objective data providing unique insights into good practices worldwide as they have come to understand the importance of business regulation as a driving force of competitiveness. To ensure the coordination of efforts across agencies, economies such as Colombia, Kuwait, and Malaysia have formed regulatory reform committees. These committees use the *Doing Business* indicators as one input to inform their programs for improving the business environment. More than 70 other economies have also formed such committees. Governments have reported more than 3,800 regulatory reforms, 1,316 of which have been informed by *Doing Business* since 2003.[7]

Many economies share knowledge on the regulatory reform process related to the areas measured by *Doing Business*. Among the most common venues for this knowledge sharing are peer-to-peer learning events—workshops where officials from different governments across a region or even across the globe meet to discuss the challenges of regulatory reform and to share their experiences.

Researchers

Doing Business data are widely used by researchers in academia, think tanks, international organizations, and other institutions. Since 2003, thousands of empirical articles have used *Doing Business* data or its conceptual

framework to analyze the impact of business regulation on various economic outcomes.[8] *Doing Business 2020* presents a literature review of recent research on the effects of business regulation in chapter 2. That chapter is an update to a similar exercise conducted in *Doing Business 2014* and focuses on research published in the top 100 academic journals in economics between 2013 and 2019.[9]

What is next?

Doing Business 2021 will include the contracting with the government indicator set in the calculation of the ease of doing business ranking. The contracting with the government indicator set measures the procedures and time to win a public procurement contract according to a standardized case study focused on the infrastructure sector (see chapter 5 on contracting with the government). It also assesses the compliance of regulation with internationally recognized good practice. The data benchmark the efficiency of the public procurement life cycle in the 190 economies measured by *Doing Business*. As in the case of the other topics included in *Doing Business*, the data identify sources of delay and waste of resources.

Also, as part of a five-year cycle established in *Doing Business 2015*, *Doing Business 2021* will update the metrics of the best and worst regulatory performance used in the calculation of the scores for the various *Doing Business* indicator sets as well as the data on gross national income per capita and the export and import products used as a reference for each economy in the trading across borders indicator set. This update will allow the *Doing Business* data to more accurately reflect the best regulatory practices achieved by top-performing economies in the last five years—these practices will set the new standard for other economies to pursue. *Doing Business* is also considering expanding the coverage of the study to include the second-largest business city for economies with a population of more than 100 million (as of 2019), and the third- and fourth-largest business cities for economies with a population of more than 300 million.

Notes

1. Djankov 2016.
2. These papers are available on the *Doing Business* website at http://www.doingbusiness.org/methodology.
3. For getting credit, indicators are weighted proportionally, according to their contribution to the total score, with a weight of 60% assigned to the strength of legal rights index and 40% to the depth of credit information index. In this way, each point included in these indexes has the same value independent of the component it belongs to. Indicators for all other topics are assigned equal weights. For more details, see chapter 7 on the ease of doing business score and ease of doing business ranking.

4. La Porta and Shleifer 2008; Schneider 2005.
5. The annual data collection exercise is an update of the database. The *Doing Business* team and the contributors examine the extent to which the regulatory framework has changed in ways relevant for the features captured by the indicators. The data collection process should therefore be seen as adding each year to an existing stock of knowledge reflected in the previous year's edition, not as creating an entirely new dataset.
6. Although about 15,000 contributors provided data for *Doing Business 2020*, many of them completed a questionnaire for more than one *Doing Business* indicator set. Indeed, the total number of contributions received for *Doing Business 2020* is more than 18,400, which represents a true measure of the inputs received. The average number of contributions per indicator set and economy is more than seven. For more details, see http://www.doingbusiness.org/contributors/doing-business.
7. These are reforms for which *Doing Business* is aware that information provided by *Doing Business* was used in shaping the reform agenda.
8. Since the publication of the first *Doing Business* study in 2003, more than 3,700 research articles discussing how regulation in the areas measured by *Doing Business* influences economic outcomes have been published in peer-reviewed academic journals; over 1,300 of these are published in the top 100 journals. Another 10,000 are published as working papers, books, reports, dissertations, or research notes.
9. The journal and institution rankings are from Research Papers in Economics (RePEc) and cover the last 10 years. They can be accessed at https://ideas.repec.org/top/top.journals.simple10.html and https://ideas.repec.org/top/top.inst.allbest10.html.

CHAPTER 2

The effects of business regulation

- Since 2003, nearly 4,000 articles using *Doing Business* data have been published in peer-reviewed academic journals and more than 10,000 working papers have been posted online.
- Improvements in firm entry regulation are associated with higher productivity.
- Better land property rights improve investment decisions by individuals.
- Court efficiency plays a major role in the process of economic development.

Doing Business provides annual cross-country data on how governments regulate business, enabling research on how regulation affects development. Thousands of empirical studies have assessed how the regulatory environment for business affects productivity, growth, employment, trade, investment, access to finance, and the size of the informal economy. Since 2003, when *Doing Business* was first published, numerous articles discussing how regulation in the areas measured by the study influences economic outcomes have been published in peer-reviewed academic journals. Over 10,000 additional working papers have been posted online.[1]

Doing Business 2014 reviewed research articles—including those published in top-ranking economics journals between 2008 and 2013 or disseminated as working papers in 2012/13—that used *Doing Business* data for analysis or motivation.[2] This chapter updates that review, adding research articles published between January 2013 and July 2019.

Firm entry

Changes to start-up regulation affect the number and size of firms in the market. New firm entry results in higher productivity through the reallocation of resources from old to new firms. Fernandes, Ferreira, and Winters (2018) find that the entry-simplifying reform introduced in Portugal in 2005 boosted sectoral competition. Using employer–employee data for all private sector firms and workers in the country, they also find that higher competition is associated with better firm performance. Furthermore, greater market competition is associated with an increase of 6–11% in executive remuneration. Alfaro and Chari (2014) examine the effects of the "License Raj" reform in India on firm size distribution and resource reallocation. The authors find that the number of small firms increased in industries with easier start-up rules. They also observe an increase in the productivity of these sectors, suggesting a reduction in resource allocation distortions over the same period.

Meeting start-up requirements involves additional costs for firms. An implicit assumption is that firms benefit from start-up registration in the form of expanded access to credit—legal protection compensates for the additional costs of becoming formal. Testing this hypothesis using data from Benin, Benhassine and others (2018) find that start-up registration did not improve the sales or profits of an average firm. Testing the benefits of eased start-up regulation in Vietnam, however, Demenet, Razafindrakoto, and Roubaud (2016) find that the value added of firms increased by 20% on average.

Property transfer

Private land rights facilitate greater access to credit. Using enterprise data, Karas, Pyle, and Schoors (2015) evaluate the effect of greater land tenure security among large urban industrial businesses in the Russian Federation

and find that private land rights facilitate access to external financing and promote investment.

When property rights are not secure, fear of expropriation may drive entrepreneurs to make suboptimal investment decisions. Goldstein and others (2018) analyze the benefits of strengthening land property rights in rural Benin by examining the link between land demarcation and investment. The authors find that the land tenure security improvements of demarcation induce a 23–43% shift toward long-term investment on demarcated land parcels. They also find that improved tenure security leads households to shift their investment decisions from subsistence to perennial cash crops and that female-headed households are more responsive than male-headed households to the demarcation reform.

Reliability of electricity

Power outages represent a significant obstacle to doing business in economies worldwide. An unreliable supply of electricity results in spoiled perishable goods, damage to sensitive equipment, and productivity losses. Firms adapt by buying generators and other expensive equipment to protect sensitive inventory and machinery. Allcott, Collard-Wexler, and O'Connell (2016) examine the effects of electricity shortages on input choices, revenue, and productivity in manufacturing plants in India between 1992 and 2010. The authors find that electrical shortages reduce the average plant's revenue by 6–8%, and that producer surplus drops by 10%, of which roughly half is due to the cost of backup generators. Moyo (2013) investigates the relationship between power outages and manufacturing productivity in Africa in 2002–05 and finds a negative relationship between both the number of hours per day without electricity and the percentage of output lost due to outages and productivity.

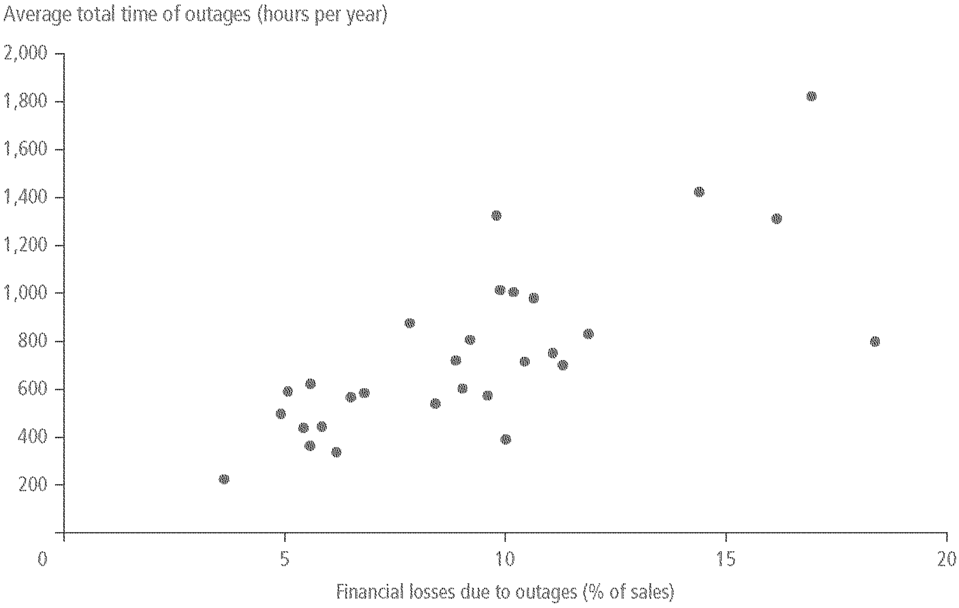
Andersen and Dalgaard (2013) also focus on African businesses in estimating the impact of power outages on economic growth over the period 1995–2007. The authors find that a 1-percentage-point increase in outages decreases long-run GDP per capita by 3%. Using firm-level data for 14 Sub-Saharan African economies, Cole and others (2018) find that reducing average outage levels to those of South Africa would increase overall sales of firms by 85%, and the increase would rise to nearly 120% for firms without a generator (figure 2.1).

Labor market regulation

Changes in labor market regulation affect unemployment rates and labor force participation. Labor market regulation also determines firm productivity.

When set above the market equilibrium salary, minimum wages raise unemployment in competitive markets. Using data for 2001–09, Jales (2018) finds that the introduction of a minimum wage in Brazil is

FIGURE 2.1 Reducing power outages boosts overall firm performance



Source: Cole and others 2018.
Note: Financial losses are positively correlated with the average total time of outages.

associated with a 39% increase in informal employment. Yamada (2016) finds that the introduction of a minimum wage in Indonesia resulted in a reduction in both hours of work and employment. Although noting an increase in earnings among low- and middle-income households, the author concludes that the welfare gain resulting from raising the minimum wage is negligible.

Alvarez and Fuentes (2018) find that a minimum wage increase in Chile under rigid labor market regulation is partially responsible for a slowdown in manufacturing productivity in the late 1990s. The authors estimate that a real increase of about 22% in the minimum wage during the period 1998–2000 reduced total factor productivity by 2% in industries with fewer unskilled workers and 4% in those with more unskilled workers. Bjuggren (2018) finds that increased labor market flexibility in Sweden is associated with higher labor productivity. In particular, the author examines the effects of a 2001 reform of employment protection rules that allowed firms with fewer than 11 workers to exempt 2 workers from seniority rules (under which the last person hired is the first to be fired in the case of redundancy).

Amirapu and Gechter (2019) find that restrictive labor regulation in India is associated with a 35% increase in firms' unit labor costs. Kawaguchi and Murao (2014), using data from high-income economies from 1960 to 2010, find that the persistence of youth unemployment is positively correlated

with labor market rigidity. A study by Acharya, Baghai, and Subramanian (2013) suggests, however, that limited labor market rigidity in some high-income economies is positively correlated with firm innovation, primarily because job stability boosts employee innovation.

Changes to labor market regulation are associated with changes in credit markets. Alimov (2015) analyzes the impact of employment protection regulation on bank lending in 25 high-income economies and finds that increases in employment protection lead to greater loan spreads. He also finds that increases in employment protection result in bank loans that are significantly smaller and have shorter maturities.

Trade regulation and costs

The *Doing Business* indicators on trading across borders measure the time to clear official procedures, including customs controls. A growing body of literature uses these data. Martincus, Carballo, and Graziano (2015) measure the effects of customs-related delays on firms' exports by studying export transactions data from Uruguay for the period 2002–11, including the actual time it took for these transactions to clear customs. Their findings suggest that a 10% increase in customs delays results in a 4% decline in exports. This effect emanates from higher costs for exporters, which subsequently reduce their foreign sales, as well as for buyers, which appear to reduce their exposure to firms whose deliveries are subject to such delays. Similarly, Hornok and Koren (2015) analyze the impact of administrative per-shipment costs on trade volumes. Employing Spanish shipment-level export data for the period 2006–12, the authors find that a 50% reduction in per-shipment costs is equivalent to a 9-percentage-point reduction in tariffs.

Court efficiency

Judicial reforms targeting the quality, speed, and access of the judiciary favor improvements in productivity and economic development. Chemin (2018) finds that these reforms improved firm productivity by 22% in sectors requiring more relationship-specific investments.

Judicial efficiency is essential to firm productivity. Ahsan (2013) uses firm-level data from India to study the complementarities between the speed of contract enforcement and tariff liberalization. His findings suggest that the gains in productivity from a reduction in input tariffs are highest for firms in economies with the most efficient courts.

Gianfreda and Vallanti (2017) analyze the impact of court delays in settling labor disputes in Italy. The authors argue that delays in trials of labor disputes increase firing costs. They also show that the rate of job turnover is significantly lower in judicial districts with longer trials.[3]

Efficient courts improve financial markets. Ponticelli and Alencar (2016) find that firms operating in Brazilian municipalities with less congested civil courts experienced a larger increase in the use of secured loans. In the years following a reform that increased the protection of secured creditors, firms also experienced a significant increase in investment and output value. These results underscore the importance of the timely enforcement of creditors' rights by the courts to improve access to finance.[4]

Faster and cheaper access to justice reduces some of the obstacles faced by entrepreneurs. Lichand and Soares (2014) analyze the creation of special civil tribunals in São Paulo in the 1990s that expanded the geographic presence of the justice system, simplified judicial procedures, and increased the speed of dispute adjudication. They find that the implementation of the tribunals led to higher rates of entrepreneurship among individuals with higher levels of education.

Better access to long-term debt reduces the volatility of firm growth. Demirgüç-Kunt, Horváth, and Huizinga (2017) examine this link using firm-level data for 47 developing economies over the period 1995–2013. They find that better credit information systems and contract enforcement mechanisms supporting credit markets improve firm access to long-term finance.

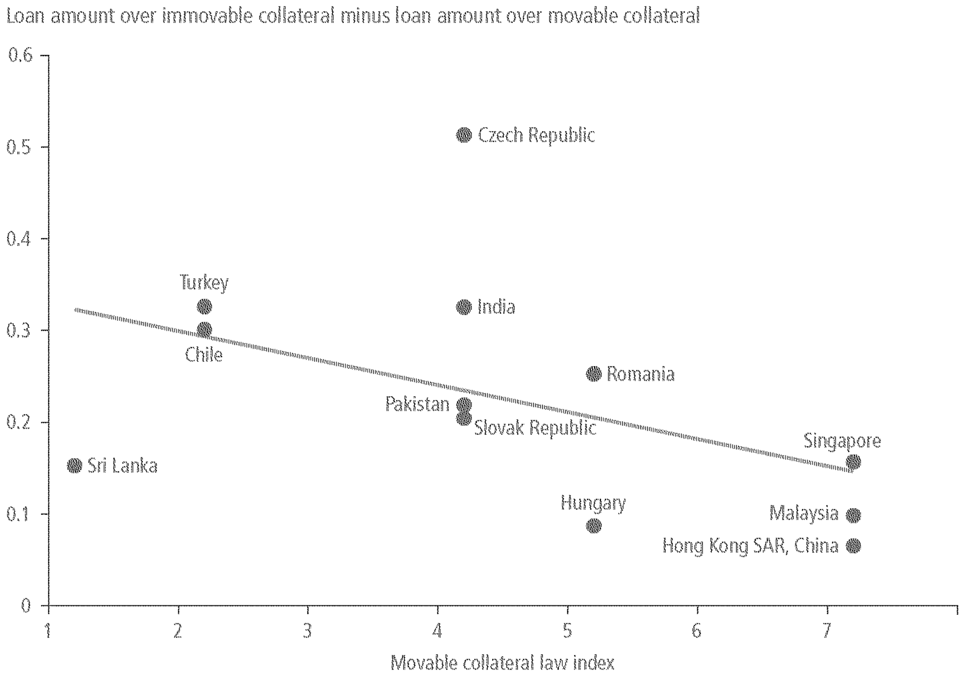
Bankruptcy costs play a major role, during both crises and recoveries. Ordoñez (2013) argues that lending rates, investment, and output (measured by real GDP per capita) fall quickly during a crisis, but slowly during a recovery. This asymmetry is stronger in economies with greater bankruptcy costs (measured by the cost of bankruptcy, bankruptcy duration, and the recovery rate).

Chakraborty (2016) argues that higher-quality institutions help firms to invest in institutional-dependent inputs, which might affect a firm's performance. The author finds that, in India, judicial quality is a significant determinant of higher firm performance, for both exports and domestic sales. A conservative estimate suggests that a 10% increase in judicial quality increases firm sales by 1–2%.

Creditors' rights

Calomiris and others (2017) study the link between creditors' rights and credit from banks using microlevel data for 12 emerging market economies (figure 2.2). The authors posit that legal systems for movable collateral are usually weak—they limit the scope of the movable assets that can be used as collateral, lack centralized registries, and require court orders to enforce defaults. When the protection of creditors' rights for movable collateral improves, however, banks lend one-third more using the same level of collateral. The authors test which of the components (creation, monitoring, or enforcement) matter more and find that the monitoring and enforcement components are the most relevant, implying that the results are driven by the existence of collateral registries and the possibility of out-of-court enforcement, and not by the mere existence of laws.

FIGURE 2.2 Better protection of creditors' rights over movable assets is associated with a greater supply of movable-collateralized loans, relative to immovable assets



Source: Calomiris and others 2017.
Note: The movable collateral law index is based on seven of the eight components of the *Doing Business* strength of legal rights index published until 2013. The vertical axis measures the difference between the average loan-to-value of GlobalBank's loans backed by immovable assets and movable assets (machinery, inventory, and accounts receivable). Average for the period 2002–04.

Better protection of creditors' rights benefits firms, as long as the protections improve the efficiency of credit markets and access to funding. Berkowitz, Lin, and Ma (2015) study the complementarity between creditors' rights and firms' protections against the potential expropriation of their assets. Using data from China, the authors find that a reform reducing expropriation risks and improving creditors' rights led to an increase in firm value. By analyzing a securitization reform in India, however, Vig (2013) finds that the strengthening of creditors' rights introduces distortions that require firms to alter their debt structures by increasing liquidity.

Credit information

Credit information systems are intended to reduce the challenges of asymmetric information between borrowers and lenders. With the right infrastructure and regulation, credit bureaus allow lenders to identify the risks associated with borrowers. Doblas-Madrid and Minetti (2013) find that information sharing reduces contract delinquencies and defaults.

Specifically, lenders joining the bureau experience a drop of 23–30 days in the maximum number of days a borrower's payment is late (and a reduction of 6 days in the average number of days a payment is late). Furthermore, lenders joining the bureau were between 7% and 9% less likely on average to experience a serious delinquency (90 days or more past due); an even larger decline was observed in the probability of a major default event (such as debt collection or legal action). Dierkes and others (2013) find that business credit information sharing improves the quality of default predictions for German firms, especially for older firms and those with limited liability.

Firms identified as low risk by credit information systems enjoy better access to credit. For example, using firm-level data and credit scores for Belgian manufacturing firms between 1999 and 2007, Muûls (2015) finds that firms export and import more when they have better credit ratings and face lower credit constraints. The author argues that a firm's negative financial situation might make its overseas suppliers reluctant to trade with the firm, thereby affecting its imports. Being credit-constrained also prevents firms from overcoming the fixed costs associated with exporting and importing.

Other economic agents benefit indirectly from credit bureau signals. Beck, Lin, and Ma (2014) study the link between tax evasion and financial sector outreach using data for more than 64,000 firms across 102 economies for the period 2002–10. The authors show that firms evade taxes to a lesser degree in economies with better credit information sharing systems. This effect is stronger for smaller firms, firms in smaller cities and towns, as well as those operating in industries that rely on external financing, and in industries and economies with greater growth potential.

Shareholders' rights

Strong shareholders' rights are critical for the efficient operation of stock markets. Claessens, Ueda, and Yafeh (2014) study the relationship of those rights with the cost of capital using data from 40 economies for the period 1990–2007. The authors find that well-defined and well-enforced shareholders' rights reduce the overall cost of capital, especially for expanding or distressed firms. They also find that the extent of creditors' rights does not have significant effects on the cost of capital. Houston, Lin, and Xie (2018) study the link between the corporate cost of capital and shareholder protection laws in the United States. On the basis of a sample of about 5,000 public firms between 1985 and 2013, they find that weakened litigation rights for shareholders increase firms' implied cost of capital by approximately 5% above the sample median.

Shareholders' rights are positively associated with economic growth. Brown, Martinsson, and Petersen (2013) find that firms with strong shareholder's rights and better access to financing from their shareholders are more likely to invest in research and development. The analysis is based on a sample of 32 high- and middle-income economies.

When lending is limited during banking crises, stock markets provide an alternative source of funds for firms. Levine, Lin, and Xie (2016) study this relationship using data for 36 economies from 1990 to 2011 and find that stock markets better mitigate the challenges of a crisis when stronger shareholder protection laws are in place. Economic crises tend to reduce firm value. Jenwittayaroje and Jiraporn (2019) find that having independent directors significantly improved firm value (by roughly 4%) during the recession of 2008. Cremers and Ferrel (2014) find a robustly negative association between restrictions on shareholder rights and firm value using data from the United States.

Tax regulation

Using data from Pakistan for the 2006–11 period, Waseem (2018) finds that following a tax increase firms react by underreporting profits, moving to the informal economy, or changing their legal form. Also, even though tax revenue was higher immediately after the tax increase, three years later it was below initial levels.

Belitski, Chowdhury, and Desai (2016) investigate the interaction between corruption and corporate income tax rates across a panel of 72 economies in the period 2005–11 and find that higher tax rates consistently discourage entry. They also find that corruption offsets the negative influence of high taxes on entry. Rocha, Ulyssea, and Rachter (2018) find that reducing taxes once registration costs have been eliminated reduced firm informality in Brazil; however, this effect comes mainly from the registration of existing firms and not from the creation of new formal businesses.

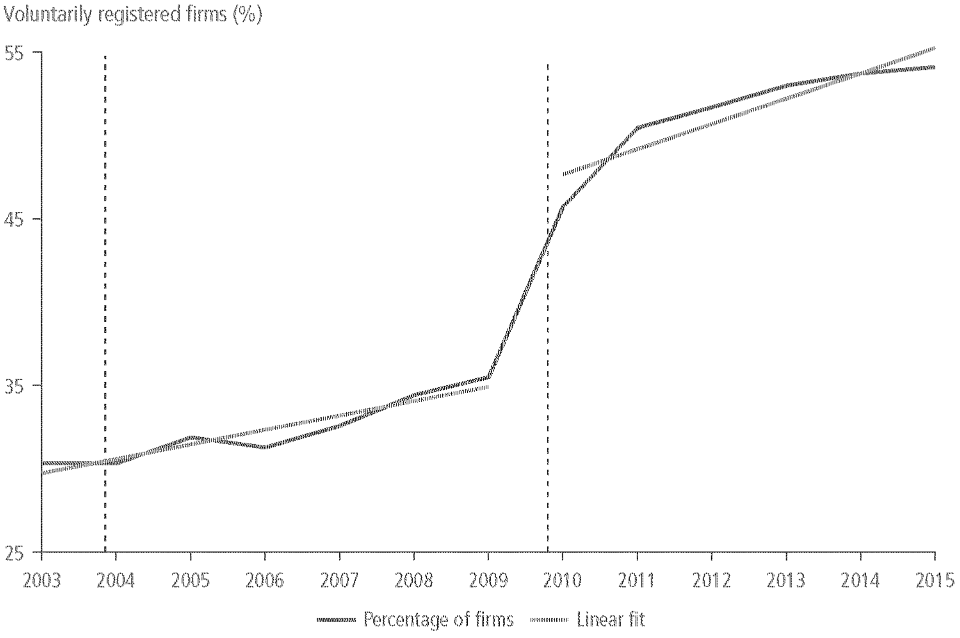
Harju, Matikka, and Rauhanen (2019) show that high compliance costs produce reactions from entrepreneurs similar to those associated with changes in tax rates (figure 2.3). Using evidence from value added tax filings in Finland, the authors find that an increase in sales is the result of a reduction in compliance costs rather than the level of the value added tax rate.

Esteller-Moré, Rizzo, and Secomandi (forthcoming) study the extent to which taxes matter in directing foreign direct investment (FDI) inflows and find that there is heterogeneity between Organisation for Economic Co-operation and Development (OECD) and non-OECD economies. Using the dataset produced by Djankov and others (2010), the authors show that taxes in non-OECD countries affect FDI flows, whereas they have no significant impact in OECD countries.

Foreign direct investment

Doing Business measures regulation from the point of view of domestic entrepreneurs. The efficiency of regulation affecting domestic firms, however, is correlated with regulation affecting FDI. Corcoran and Gillanders

FIGURE 2.3 The percentage of voluntarily registered firms in Finland increased after the reduction in compliance costs



Source: Harju, Matikka, and Rauhanen 2019.

Note: Value added tax registration is defined separately for each entrepreneur in each year. The vertical line before 2004 shows the tax rate reform introducing a VAT relief scheme. The line before 2010 shows the year where the reduction in compliance costs occurs.

(2015) study this connection and find a strong correlation between foreign investment and the ease of doing business ranking for the period 2004–09. They also find that this result is primarily driven by the *Doing Business* ease of trading across borders component.

Munemo (2014) also studies this connection using data for 138 economies over the period 2000–10. The study finds evidence that foreign investment crowds out domestic investment in economies with entry regulation costs above a certain level. This evidence suggests that reforming business start-up regulation plays a role in enhancing the complementarity between foreign and domestic business activity.

The complexity of tax systems is a major determinant of FDI. Lawless (2013) studies this relationship using data from 16 high-income source economies and 57 host economies. The author finds that the number of payments and time to comply with tax obligations have significant negative effects on whether foreign investment flows are present. Specifically, a 10% reduction in tax complexity is comparable to a 1% reduction in the effective corporate tax rate.

Overall business regulatory environment

The *Doing Business* indicators correlate with different outcomes of interest to policy makers. Kraay and Tawara (2013) evaluate this relationship with data for all *Doing Business* topics and all economies and find that quantifying the partial effects of indicators on relevant outcomes is challenging. Using data for 189 economies for the period 2005–13, however, Djankov, Georgieva, and Ramalho (2018) find that business-friendly regulation is correlated with a lower poverty head count at the economy level. This association is significant using *Doing Business* data on getting credit and enforcing contracts. Additional analysis suggests that the conduit for poverty reduction is business creation, both as a source of new jobs and as a manifestation of thriving entrepreneurship.

Summary

Changes that improve regulatory efficiency have positive effects on entrepreneurship, firm formalization, access to credit, and FDI.

Still, questions remain. First, what is the complementarity of different regulatory reforms? *Doing Business* data tell us which reforms politicians make together. Research needs to tell us whether this is the right combination of reforms for improved economic and social outcomes. Second, how do some economies reform regulation consistently over an extended period? In other words, does democracy—and frequent changes in government—incentivize more or less reform? Finally, what is the profile of the reformers: young or more experienced politicians, officials facing economic crises or an extended period of stability? The answers to such questions may teach us about the logic of regulatory reform.

Notes

1. Based on searches for citations in the nine background papers that form the basis of the *Doing Business* indicators in the Social Science Citation Index and Google Scholar (http://scholar.google.com).
2. The exception to this rule is Djankov, McLiesh, and Ramalho (2006) because they examine the impact of overall business regulation on economic growth.
3. For example, a difference in trial length between the 5th and 95th percentile is associated with a difference of almost 60% in job turnover.
4. Favara and others (2017), however, find that, for distressed firms in particular, imperfect enforcement of debt contracts in default reduces shareholder-debtor conflicts and induces leveraged firms to invest more and take on less risk as they approach financial distress.

CHAPTER 3

Removing obstacles to entrepreneurship

- Fifty-eight economies have eliminated the need for paid-in minimum capital to start a business, whereas 48 others have reduced the amount of capital required.
- Fifty-six new credit bureaus and 32 new credit registries have launched worldwide.
- Sixty-three economies have introduced online systems for filing and paying taxes.
- Forty-five economies have adopted reforms implementing or strengthening reorganization procedures to resolve insolvency.

Doing Business has recorded more than 3,800 regulatory reforms since the first study was published in 2003. Many of those reforms were implemented in four areas measured by *Doing Business*—starting a business, getting credit, paying taxes, and resolving insolvency.

Uruguay provides an example of the challenges faced by entrepreneurs and firms as well as of the improvements resulting from reforms. In 2003, entrepreneurs in Uruguay were required to deposit capital blocked at the bank equivalent to 212% of income per capita, making it expensive to start a business. Paying taxes was cumbersome for firms, with an average of 55 payments taking 304 hours to complete each year. With limited access to credit—and a low asset recovery rate in cases of bankruptcy—operating a business was challenging. Today, entrepreneurs in Montevideo decide what capital they need when they start a business. Thanks to the introduction of online tax services, the number of tax payments has been cut by one-third and the time to pay by half. With 100% of the adult population covered by a credit bureau, access to credit has been strengthened. And, if things go wrong for the company, entrepreneurs can attempt a reorganization. As a result, the recovery rate for firms in Uruguay improved significantly, rising from 12 to 45 cents on the dollar.

Starting a business: Eliminating paid-in minimum capital requirements

In *Doing Business 2004*, 124 economies required fixed paid-in minimum capital to start a business. By 2019, this number has fallen by half, with many governments eliminating the requirement after it failed to serve its intended purpose of protecting creditors.

Origins of paid-in minimum capital requirements: Controlling who can start a company

Paid-in minimum capital is the amount that entrepreneurs must legally deposit in a bank or with a notary when incorporating a business. In 1855, members of the United Kingdom's House of Lords were among the first to mention a minimum capital requirement. It was initially proposed that companies should have capital of no less than 20,000 pounds sterling in the context of the railway mania.[1]

Paid-in minimum capital requirements appeared elsewhere in Europe in the second half of the 19th century. Entrepreneurs were required to obtain government permission to start a company until the mid-1800s, and the required concessions involved considerable government scrutiny. Following the removal of concession prerequisites, European economies experienced a boom in business creation and, in some cases, speculation in the railway industry and banking sector. In response, governments enacted new regulation with stricter rules to start a business.

In Germany, for example, the Corporations Act of 1870 created the concept of joint-stock companies, which required entrepreneurs to comply

with more onerous rules when setting up a company, including much larger share values.[2] The act specified a minimum value per share of 50 German thalers for named shares and 100 thalers for bearer shares. A fixed nominal paid-in minimum requirement to start a company was first introduced in the 1892 law on limited liability companies.[3] Such firms were required to have an issued capital of at least 20,000 marks, of which at least 25% had to be paid in before the firm could operate. This amount was substantial—with income per capita of 470 marks in Germany in 1892, the paid-in minimum capital requirement was the equivalent of 42 times income per capita.[4]

Other European economies also introduced nominal paid-in minimum capital requirements. Sweden, for example, passed a Companies Act in 1895 and introduced a nominal minimum share capital. Portugal passed similar legislation in 1911, Austria in 1916, and most other Western European countries by the mid-1930s—including France, Italy, and Spain. Such legislation later spread beyond Europe to economies like Brazil, Chile, and Colombia.

Toward helping business

Once viewed as a way to provide security to creditors, paid-in minimum capital requirements proved to be inefficient.[5] In some economies, entrepreneurs would borrow the amount required for deposit at the time of business registration only to withdraw it immediately after. Worse, paid-in minimum capital requirements create barriers that prevent entrepreneurs from formalizing.[6] These requirements especially affect female-owned businesses, which tend to have less start-up capital.[7]

Doing Business has tracked paid-in minimum capital requirements in 190 economies since 2003. During that period, 106 economies enacted 139 regulatory reforms reducing or eliminating paid-in minimum capital requirements. Of these, 79 economies implemented one regulatory change, and 27 economies enacted more than one. Angola, for example, made three successive reductions of the minimum capital requirement in 2003, 2006, and 2011 before eliminating it in 2016.

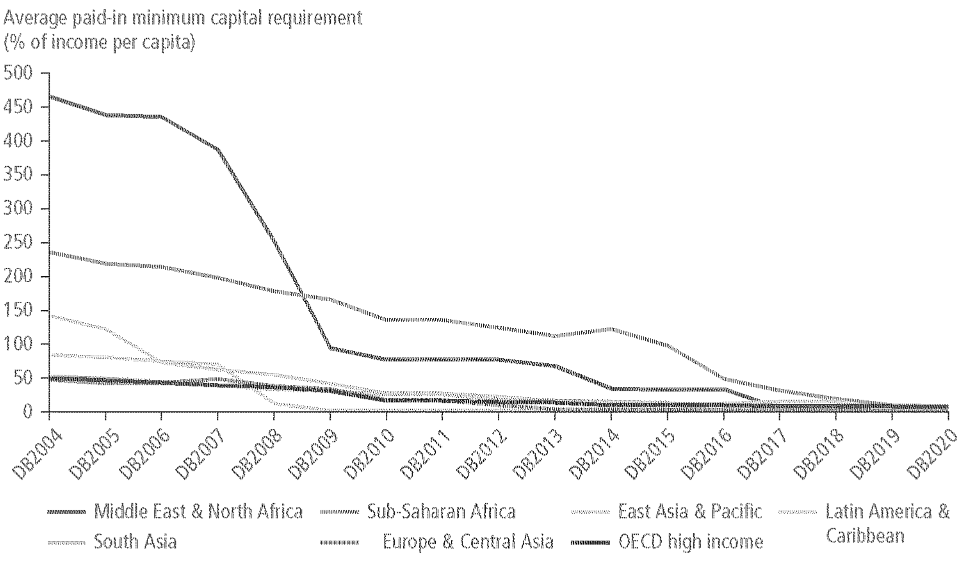
Fifty-eight economies eliminated paid-in minimum capital requirements. The most proactive regions were Europe and Central Asia (16 regulatory changes) and the Middle East and North Africa (12 regulatory changes). Some of the most recent examples are found among high-income economies of the Organisation for Economic Co-operation and Development (OECD). In May 2019, for example, Belgium amended its Commercial Code to abolish the paid-in minimum contribution requirement for limited liability companies. Following the reform, company founders were required only to prove sufficient equity to carry out operations in their financial plans.

Within the same period, *Doing Business* captured 81 regulatory changes reducing the amount of the paid-in minimum capital requirement. Sub-Saharan Africa was the region implementing the greatest number of reductions.

Many of these cuts were made by the 17 member states of the Organization for the Harmonization of Business Law in Africa (Organisation pour l'Harmonisation en Afrique du Droit des Affaires, or OHADA). Entering into force in May 2014, the revised Uniform Act regarding the Law of Commercial Companies and Interest Economics Associations simplified the rules for the creation of companies and allowed member states to set paid-in minimum requirements nationally, with a minimum of 5,000 CFA francs ($9) per share. The Central African Republic, for example, reduced its paid-in minimum capital requirement from 527% of income per capita in *Doing Business 2004* to 35% of income per capita in *Doing Business 2020*. Similarly, 20 OECD high-income economies introduced at least one reduction. In April 2019, Denmark lowered its paid-in minimum capital requirement from 50,000 kroner ($7,470) to 40,000 kroner ($5,975) for domestic limited liability companies. In the Europe and Central Asia region, paid-in minimum capital requirements were reduced 16 times during the last 17 years. For example, Croatia reduced its paid-in minimum capital requirement by half in April 2019, from 10,000 kunas ($1,505) to 5,000 kunas ($752).

The most significant changes, however, took place in the Middle East and North Africa (figure 3.1). The average paid-in minimum capital requirement in the Middle East and North Africa in *Doing Business 2004* was 466% of income per capita.[8] In *Doing Business 2020* it has fallen to just 5%. Jordan and Saudi Arabia made the biggest reductions over time—from over 1,000% of income per capita in *Doing Business 2004* to a zero paid-in minimum capital requirement.

FIGURE 3.1 Economies in the Middle East and North Africa cut paid-in minimum capital requirements the most over time



Source: Doing Business database.

Note: Myanmar and the Syrian Arab Republic were removed from regional averages as outliers.

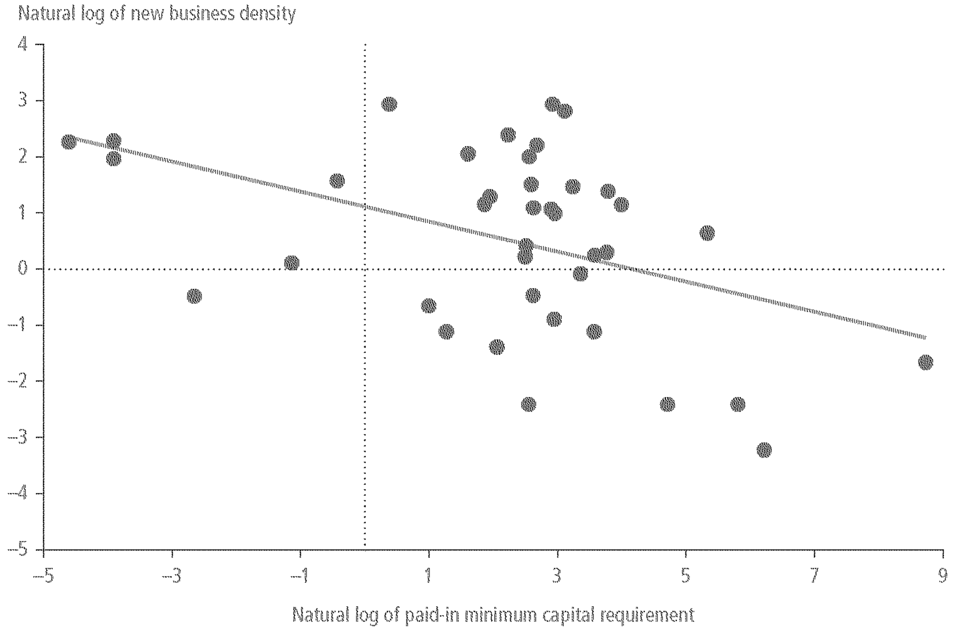
How do paid-in minimum capital requirements relate to business formalization and viability?

When deciding to incorporate a business, founders consider several factors: what legal form the company will take, what its main activities will be, where the premises will be located, how to advertise and promote the company, and so on. With a variety of start-up expenses—from incorporation costs to purchasing materials and equipment to paying salaries—the requirement to pay in a certain minimum capital necessitates additional cash that entrepreneurs must generate and be able to set aside. These costs may negatively affect an entrepreneur's decision to start a business. Data suggest that higher requirements for paid-in minimum capital are associated, on average, with lower new business entry (figure 3.2).

Furthermore, higher minimum capital that must be paid in upon incorporation is associated with a higher percentage of firms expected to pay bribes to get an operating license and with a higher share of firms identifying access to finance as a major constraint.[9]

Early advocates of paid-in minimum capital requirements believed that they served as a protection for investors. However, *Doing Business* data show

FIGURE 3.2 The higher the paid-in minimum capital requirement for business start-ups, the lower the business entry rate in the economy



Sources: Doing Business database; Entrepreneurship database (http://www.doingbusiness.org/data/exploretopics/entrepreneurship), World Bank.

Note: The analysis was conducted using cross-sectional data as well as panel data with economy and year fixed effects regression. The paid-in minimum capital requirement reflects the amount that an entrepreneur needs to deposit in a bank or with a third party, and it is recorded as a percentage of the economy's income per capita. New business density represents the number of newly registered corporations per 1,000 working-age people (age 15–64). The relationship is significant at the 5% level after controlling for income per capita. Annual data are available for 2006–16; the dataset comprises 93 economies where observations are available on both metrics. For visual simplification, the graph displays data only for 2014 with 39 observations.

that economies requiring businesses to pay in 100% or more of income per capita upon incorporation tend to have a recovery rate that is 17 cents lower, on average, than economies that require less capital.[10] Economies with lower paid-in minimum capital requirements also tend to have, on average, stronger regulation for the protection of minority investors.[11] In the end, investor protection is guaranteed with much more efficient ways than the requirement of a fixed paid-in minimum capital for all companies.

Getting credit–credit information: Developing credit reporting systems

Since the inception of *Doing Business*, 56 new credit bureaus and 32 new credit registries have launched worldwide. Credit information sharing has become a key element in the infrastructure of credit markets around the world as a prerequisite for sound risk management and financial stability. Credit bureaus and registries offer a way to minimize the problem of asymmetric information because they help lenders better predict borrowers' capacity to repay, therefore reducing the probability of default.[12]

The emergence of credit information sharing around the world

Before the establishment of credit reporting service providers, credit information sharing took place informally. During the 19th century, communities and merchants in the United Kingdom shared only negative information, maintaining lists of individuals with poor credit records in an effort to reduce their own risk and offer credit to more borrowers. The first formal arrangement for credit information sharing emerged in the United States in the 1840s with the creation of the first commercial credit reporting registries.[13]

In the 1950s and 1960s the first bureaus operated with limited information and focused on particular industries, such as banks and retailers. Credit reporting systems have evolved from distributing only negative information (for example, individuals with overdue payments) to including positive information that allows a debtor to create "reputational collateral," typically in the form of a credit score that signals a borrower's individual creditworthiness to a large pool of lenders. Since the 1980s, the credit reporting industry has expanded worldwide.

Expanding consumer credit has fueled the emergence of credit bureaus and registries in developing economies. In recent decades, major international bureaus have opened in low-income economies, bringing their expertise developed in high-income markets.

Improving credit reporting systems in developing economies

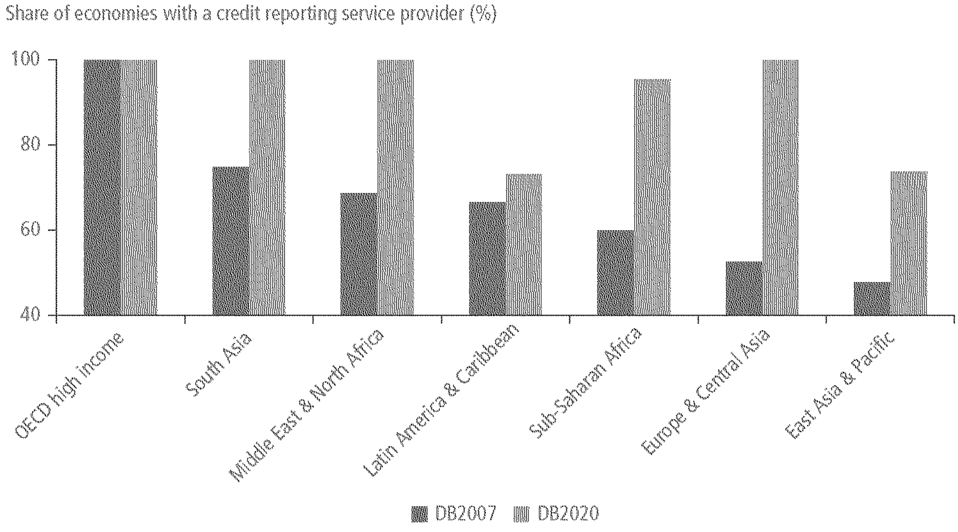
Credit bureaus and registries have become nearly universal. Whereas 67% of economies had a private credit bureau or a public credit registry in *Doing Business 2005*, in 2019 that figure is 88%.

In *Doing Business 2005*, all OECD high-income economies had an operating credit bureau or registry compared to 57% of economies in Sub-Saharan Africa.

Since then, most new credit bureaus and registries were established in developing regions. Before 2008, Sub-Saharan Africa had very few credit bureaus and lending markets were underdeveloped.[14] Governments began passing laws licensing credit bureaus and mandating credit information sharing by commercial banks. In *Doing Business 2020*, 92% of economies in Sub-Saharan Africa have an operational credit bureau or registry (figure 3.3). Seventeen of the 62 new credit bureaus and 15 of the 39 new credit registries launched since the first *Doing Business* study were established in Sub-Saharan Africa. The Europe and Central Asia region follows closely, with 16 credit bureaus and 7 credit registries founded since the inception of *Doing Business*. Eastern European economies had no private credit bureaus until the mid-1990s and, as they transitioned to market economies, required legislative changes to encourage commercial banks to share credit data.

Despite substantial reform, Sub-Saharan Africa remains the region with the least developed credit information systems. Until recently in the economies of the West African Economic and Monetary Union (Union Economique et Monétaire Ouest Africaine, or UEMOA) credit information was available only through the Central Bank of West African States (Banque Centrale des Etats de l'Afrique de l'Ouest, or BCEAO) credit registry, which operated with minimal features. The registry did not provide comprehensive credit reporting services to lenders; instead, its primary aim was to support the BCEAO's supervision functions. In 2015 the BCEAO selected Creditinfo VoLo as the accredited company to operate a credit bureau in its member economies; operations began in February 2016.

FIGURE 3.3 Europe and Central Asia and Sub-Saharan Africa saw the largest increases in credit reporting service providers since 2005/06



Source: Doing Business database.
Note: The sample includes 174 economies with data available back to *Doing Business 2007*.

In Nigeria, credit bureaus were formally recognized starting in 2008 when the Central Bank of Nigeria licensed three private credit bureaus. As in UEMOA economies, the low coverage rate presented an obstacle to credit bureau development in Nigeria. In 2010, the largest credit bureau, CRC Credit Bureau Limited, covered just 4.1% of the adult population and offered basic services including online distribution of positive and negative credit data on any loan amount to both individuals and firms. In 2011, two retailers started providing data to CRC, and by 2018 CRC had increased its coverage to 14% of the adult population and offered credit scoring services, thus achieving a score of 8 (the maximum score) on the depth of credit information index.

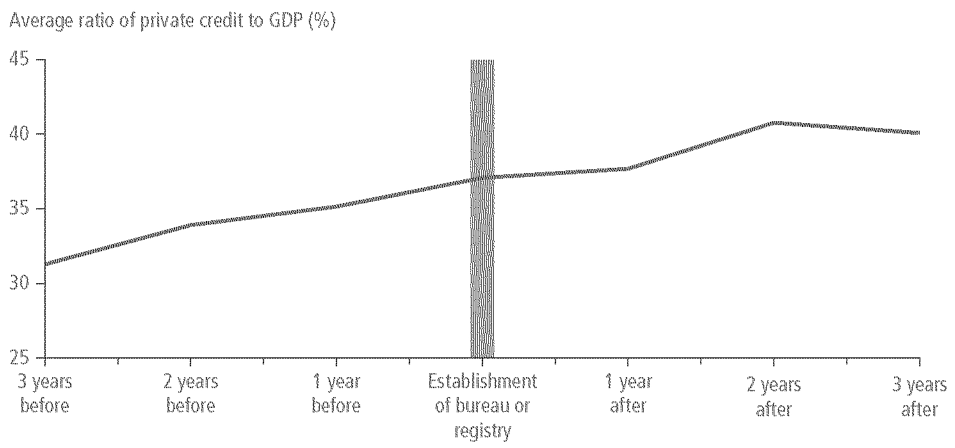
Impact of establishing new credit information systems

Doing Business data indicate that firms are 9% less likely to identify access to finance as a major constraint in economies where a bureau or registry exists. Economies with credit bureaus are also associated with higher credit-to-GDP ratios (figure 3.4).

Setting up new credit bureaus and registries has positive effects within economies. The launch of a credit bureau in Kenya, for example, has helped to reduce interest rates, collateral, and default rates for loans at commercial banks.[15] In India, lenders in the microfinance industry observed 50% lower default rates as well as higher operational efficiencies.[16]

Credit bureaus launched in 2019 are more likely to generate a higher score in the *Doing Business* depth of credit information index upon their establishment, with features including the distribution of credit scores,

FIGURE 3.4 The establishment of a credit reporting service provider is associated with more private credit in an economy



Source: Doing Business database.

Note: The analysis was conducted using ordinary least squares regression with year dummies. The figure represents an average private credit-to-GDP ratio for all economies with a credit bureau or public registry launching between *Doing Business 2006* and *Doing Business 2017*. The relationship is significant at the 1% level after controlling for income per capita and exogenous changes over time.

positive data (like on-time payment status), and data from alternative sources (such as utilities or retailers) that help to increase their coverage. Although credit bureaus opening in 2004/05 scored 2.5 points on average (out of 6 points) on the depth of credit information index, private bureaus that opened in 2017/18 scored 5 points on average.[17] In *Doing Business 2006*, it was more common for credit bureaus to launch with only a few features, such as distributing data on both individuals and firms and distributing both positive and negative data. By 2019 new bureaus and registries typically launch with the capacity to provide credit scoring services, data on utility credit, and online platforms.

Paying taxes: Transitioning from manual to electronic filing and payment

In *Doing Business 2006*, only 43 economies had an online system for filing and paying taxes. Fifteen years later, this number has more than doubled (to 106) as economies shift from manual filing and in-person payment of taxes to filing tax returns electronically and paying taxes online.

Origins of online filing of tax returns: Making compliance with tax obligations easier

Electronic filing (e-filing) and electronic payment (e-payment) are the processes of submitting tax returns and payments over the Internet. E-filing and e-payment have various benefits that have made the tax preparation process easier for businesses, including the ability to file a tax return from one's office at a convenient time and the ability to prepopulate tax returns with data already held by the tax administration.

The United States was the first economy to introduce e-filing in 1986, followed by Australia in 1987.[18] E-filing in the United States began as a small test program consisting of just five tax preparers from the cities of Cincinnati, Raleigh-Durham, and Phoenix.

Although tax preparers used special computers and software to simplify tax preparation in the 1980s, they still had to print all the forms and mail them to the Internal Revenue Service (IRS). The early e-filing process consisted of tax preparers using a machine called Mitron—a tape reader with a modem. The tax preparer would insert the tape with the tax data and then transfer it to the IRS. At the IRS, an agent would transfer the tape into a supercomputer called Zilog, which would read the data and organize it into files that the IRS could use for processing. The program's success prompted the IRS to expand it to additional cities. By 1987, 66 tax preparers from seven U.S. cities had used the system to file roughly 78,000 tax returns. To improve the system, that year the IRS added an electronic direct deposit option, allowing tax refunds to be wired to the taxpayer's bank account.

In 1988 the IRS moved to an IBM processing system, which eliminated the need for an IRS employee to manually connect a phone to a modem.

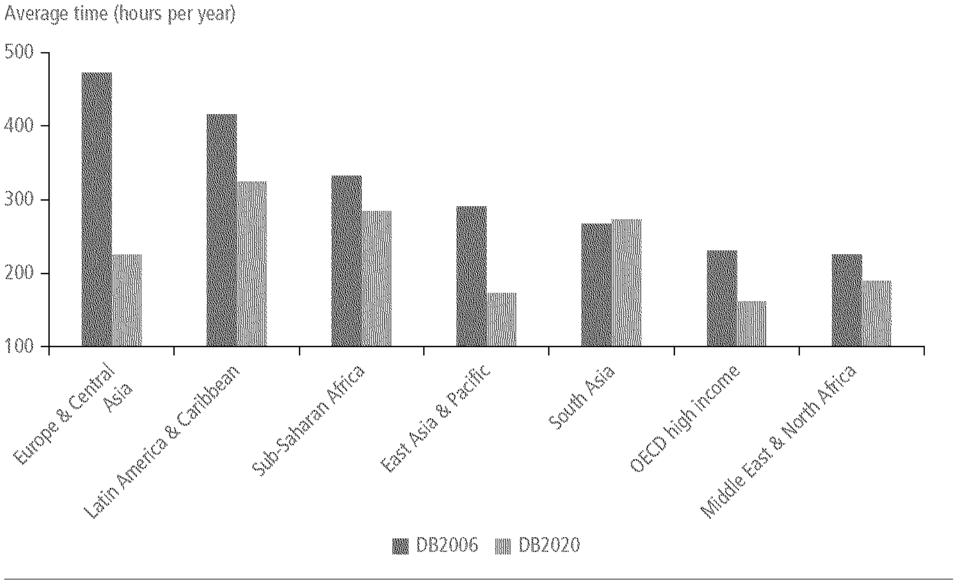
The IRS e-filing system became operational nationwide in 1990, and 4.2 million taxpayers filed their returns electronically that year. Today, in the United States e-filing and e-payment are the most common means used by taxpayers to file and pay their taxes.

From paper to electronic tax returns and tax compliance simplification

The introduction of electronic systems for filing and paying taxes has cut tax compliance times globally. The use of electronic tax filing and payment systems has risen sharply since 2004, with the most notable progress in the economies of Europe and Central Asia (figure 3.5). By 2018, the average compliance time in this region fell from 473 to 225 hours per year mainly because of the use of e-filing and e-payment in addition to simplifying and streamlining the tax systems of the individual economies. The most common feature of reform globally in the area of paying taxes was the implementation or enhancement of electronic filing and payment systems.

Since *Doing Business 2006*, 63 economies have introduced online platforms for filing tax returns including online payment modules. Europe and Central Asia and East Asia and the Pacific were the two most proactive regions introducing such systems. Among high-income economies, 97% use electronic filing or payments, whereas Sub-Saharan Africa has the lowest share of economies (17%) using such features. Factors inhibiting

FIGURE 3.5 The Europe and Central Asia region has made the most notable progress in reducing tax compliance time



Source: Doing Business database.

Note: In South Asia, time in DB2020 is higher than time in DB2006 because of Maldives, which in *Doing Business 2013* introduced three major taxes: business profit taxes, value added tax, and pension contributions. Therefore, compliance time in Maldives went up from 0 to 391 hours.

the adoption of technology by tax administrations and taxpayers include low literacy levels, unreliable information technology (IT) infrastructure, and poor availability of suitable accounting and tax preparation software. *Doing Business* data show, however, that the use of online systems for tax filing and payment resulted in efficiency gains in several economies in Sub-Saharan Africa in 2018 including Côte d'Ivoire, Kenya, Mauritius, and Togo.

As of *Doing Business 2013*, the Czech Republic had implemented several reforms that reduced the time to file and pay taxes to just 230 hours (from 866 hours in *Doing Business 2006*). The reform process began in early 2000 with changes to regional and central tax administration organizational structures, the introduction of a mandatory tax certification test for employees, the adoption of strict tax audit guidelines, and the development of the tax administration information system. At the same time, the tax authority built a centralized tax administration register and began upgrading its systems to prepare for the transition to online tax return filing. Electronic submission of tax documentation began in 2004. Finally, in 2011, the Czech Republic expanded the list of taxpayer services provided online and established a Specialized Tax Office that launched a taxpayer–tax agency feedback mechanism to improve client services. All of these efforts resulted in a substantial reduction in the time to file and pay taxes.

China has implemented business tax reforms consistently over the years, with notable results. In *Doing Business 2006*, for example, businesses in Shanghai spent 832 hours per year on average to prepare, file, and pay taxes, and they had to make 37 payments. By *Doing Business 2020*, these metrics have been reduced to just 138 hours per year and 7 payments.

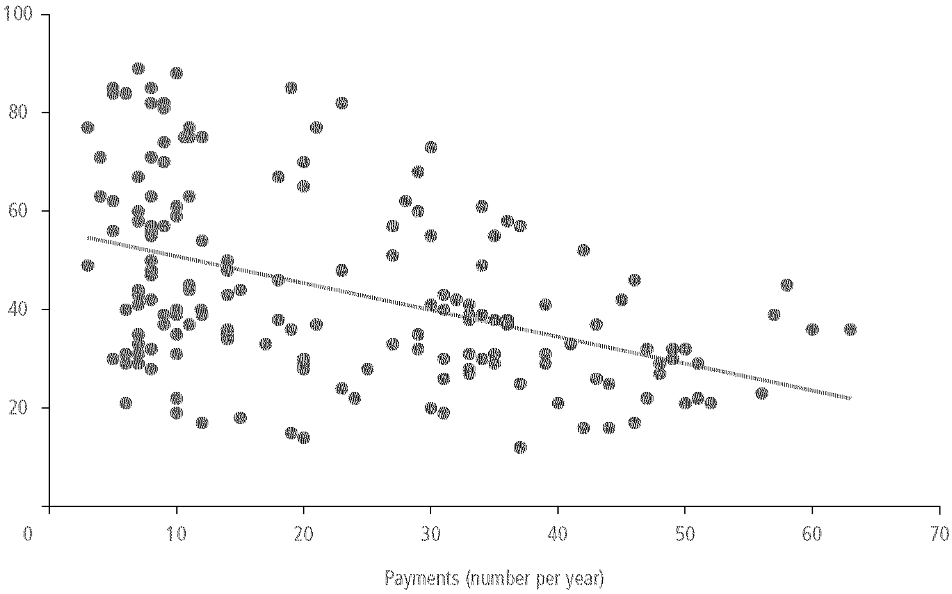
In 2014 China integrated taxpayer services functions through a mobile tax application and launched official accounts on the two main Chinese social media platforms (WeChat and Weibo). In 2015, the Internet+Taxation Initiative unlocked the potential of big data for taxpayer services, such as data sharing among government bodies, online training, and e-invoices. The State Taxation Administration launched the Golden Tax III system in 2017, which facilitated e-filing of different stamp duty taxes. Additionally, China implemented a series of measures in the past two years, which simplified corporate income tax, labor taxes, value added tax declarations, and e-delivery of invoices.

How do e-filing and e-payment of taxes relate to less corruption?

Studies show that high tax compliance costs are associated with larger informal sectors, more corruption,[19] and less investment.[20] The modernization of IT infrastructure increases efficiency, reduces physical interactions between tax officials and taxpayers, and eliminates the physical exchange of cash, which can reduce rent-seeking. Moreover, data show economies with fewer tax payments[21] have a lower perceived level of public sector corruption (figure 3.6).

Businesses care about what they get in return for their taxes. Good quality physical infrastructure is critical for the sound functioning of an economy—it

FIGURE 3.6 Fewer tax payments are associated with a lower perception of corruption



Sources: Doing Business database; Transparency International data (https://www.transparency.org/cpi2017).

Note: The figure compares the Corruption Perceptions Index with the absolute number of tax payments that a medium-size company pays in a year (for each year between 2012 and 2018). The analysis was conducted using cross-sectional data as well as panel data with economy and year fixed effects regression. The relationship is significant at the 5% level after controlling for income per capita. A higher score on the Corruption Perceptions Index indicates a lower level of perceived corruption. Data for the Corruption Perceptions Index are for 2017. The sample comprises 169 economies. In the paying taxes methodology, the number of tax payments is recorded as one when a tax is filed and paid online regardless of the statutory number of filings and payments.

plays a central role in determining the location of economic activity. The efficiency with which tax revenue is converted into public goods and services has an impact on the tax morale of businesses and individuals. Data show that, in economies where fewer tax payments result from the use of e-filing and e-payment of taxes, the public's perception of the quality of public services—and their independence from political pressure—is higher.[22] Electronic services facilitate a transparent platform for collaboration among government agencies as well as interactions with taxpayers, reducing the vulnerability of public services to political interference.

Technology is changing how taxes are administered. More and more companies are using tax software, and more and more tax authorities are creating easier-to-use online portals to simplify tax compliance. Electronic systems for filing and paying taxes benefit taxpayers by reducing preparation time and errors by enabling automated verification of transactions. These systems also benefit the tax authorities by making tax systems more robust and reducing operational costs—such as those associated with processing and handling paper tax returns—allowing human and financial resources to be reallocated to efforts that improve services to taxpayers. In the past

15 years, tax administrations worldwide have sought to introduce and continuously enhance their online systems to improve their efficiency and facilitate more comprehensive and faster risk assessment and compliance checks on returns.[23] This efficiency in turn has benefitted taxpayers by easing the compliance burden.

Resolving insolvency: Introducing or strengthening reorganization procedures

Since *Doing Business 2006*, more than 40 economies have adopted reforms implementing or strengthening reorganization procedures to resolve insolvency. Having reorganization procedures reduces failure rates of small and medium-size enterprises and prevents the liquidation of insolvent but viable businesses.

The emergence of reorganization procedures

Reorganization is a process by which the financial well-being and viability of a debtor's business may be restored through a reorganization plan, so that the business continues to operate as a going concern. In accordance with good international practices, a reorganization procedure enshrines clear rules on its commencement, including an insolvency test; provides a mechanism to manage the debtor's property; sets minimum requirements for the content and adoption of the reorganization plan; contains an element of debt restructuring; and provides a stay period for enforcement actions. Before the introduction of reorganization, corporate overindebtedness was solved primarily by applying mechanisms like in-court liquidation and schemes of arrangement with creditors.

The concept of liquidation has been present in both civil and common law economies since as early as the 16th century. Liquidation is the process of assembling and selling the assets of an insolvent debtor, emptying it and distributing the proceeds to its creditors. Liquidation rests under the assumption that exit from the market encourages entrepreneurs to reestablish themselves with a better reallocation of resources, generating firm creation and economic growth.[24] The risk, however, arises when a viable business is forced to liquidate but could otherwise become profitable with the appropriate restructuring of its obligations, management, or business industry or by undertaking other structural changes. Research also shows that after completion of liquidation, creditors often recoup only a portion of their investment.[25]

Apart from liquidation, many common law economies also still rely on other instruments like the "scheme of arrangement" for debt restructuring. Initially introduced into English law in 1870[26]—and later to the economies of the Commonwealth[27]—the scheme of arrangement is a court-approved agreement between a company and its shareholders or creditors aimed at enabling both solvent and insolvent companies to rearrange their assets and liabilities.

The scheme of arrangement is not a tool designed specifically to restore the financial viability of an insolvent business.[28] Therefore, the need for better mechanisms emerged. Modern insolvency regimes shifted the focus toward offering restructuring tools to businesses that are economically viable but face temporary financial distress, while also allowing a speedy liquidation of nonviable businesses. Inspired by commercial debt restructuring performed by merchants with their trade networks through negotiation, and supplemented with the stay of enforcement proceedings, the idea of a reorganization procedure emerged as an efficient alternative. Originally introduced into law in the United States in 1978, the first wave of reforms establishing reorganization procedures followed the financial crisis at the end of the 20th century.[29] It was at this time that legislators realized the necessity of separating unviable businesses from viable ones, and to preserve the latter. Most reforms that introduced reorganization procedures were, however, implemented during and after the 2008 financial crisis.

Introducing effective reorganization procedures is a recent phenomenon, and, in many economies, businesses facing financial distress still do not have an option to reorganize. Around the world, one-third of economies have no reorganization procedures.

Reforms introducing reorganization procedures

The case of India provides an example of successful implementation of reorganization procedures. India established an insolvency regime in 2016.[30] Before the implementation of the reform, it was very burdensome for secured creditors to seize companies in default of their loans. The most common way for secured creditors to recover the debt was through very lengthy and burdensome foreclosure proceedings that lasted almost five years, making efficient recovery almost impossible. The new law introduced the option of reorganization (corporate resolution insolvency process) for commercial entities as an alternative to liquidation or other mechanisms of debt enforcement, reshaping the way insolvent firms could restore their financial well-being or close down. With the reorganization procedure available, companies have effective tools to restore financial viability, and creditors have access to better tools to successfully negotiate and have greater chances to revert the money loaned at the end of insolvency proceedings.

Since its implementation, more than 2,000 companies have used the new law. Of these, about 470 have commenced liquidation and more than 120 have approved reorganization plans, with the remaining cases still pending. In the past, foreclosure was the most common procedure reported by legal practitioners in both Delhi and Mumbai under the case study assumptions measured by the resolving insolvency indicator set, with an approximate duration of 4.3 years. Despite some challenges in the implementation of the reform—particularly regarding court operations and the application of the law by multiple stakeholders—the number of

reorganizations in India has been gradually increasing. As a result, reorganization has become the most likely procedure for viable companies as measured by *Doing Business*, increasing the overall recovery rate from 27 to 72 cents on the dollar. This increase in the recovery rate is based on the standardized methodology and underlying assumptions of the resolving insolvency indicator set, which measures domestic limited liability companies only.

Impact of reforms related to reorganization proceedings

The highest recovery rates as measured by *Doing Business* are recorded in economies where reorganization is the most common proceeding.[31] The accessibility to reorganization procedures in an economy is associated with higher lending to the private sector. Investment growth rises as a percentage of GDP as economies make reorganization procedures available, most likely because economies with faster GDP growth rates may also be able to enhance investment and vice versa. In economies without reorganization procedures, domestic investment as a percentage of GDP declined by 1% on average between 2004 and 2019; it rose by roughly 3% on average in economies where reorganization procedures are available.[32]

In those economies with reorganization procedures, domestic investment has been rising over the same period in every region except Latin America and the Caribbean. Low-income and lower-middle-income economies in South Asia and the Middle East and North Africa have been driving this trend with domestic investment growth exceeding 10%. In contrast, for economies with no reorganization procedures, domestic investment has been falling or has remained flat in every region except East Asia and the Pacific.

Notes

1. For more information, see the Limited Liability Bill of August 7, 1855, available at https://api.parliament.uk/historic-hansard/lords/1855/aug/07/limited-liability-bill#S3V0139P0_18550807_HOL_4. The Final Act, approved on August 14, 1855, omitted any requirement for minimum capital. See https://www.legislation.gov.uk/ukpga/1855/133/pdfs/ukpga_18550133_en.pdf.
2. Germany's Corporations Act of 1870 is available at http://dlib-pr.mpier.mpg.de/m/kleioc/0010/exec/books/%22158456%22.
3. Germany's 1892 law on limited liability companies (*Das Reichsgesetz betreffend die Gesellschaften mit Beschränkter Haftung, GmBH*) is available at https://www.rechtsportal.de/Rechtsprechung/Gesetze/Gesetze/Wirtschaftsrecht/Gesetz-betreffend-die-Gesellschaften-mit-beschraenkter-Haftung/GmbHG-Gesetz-betreffend-die-Gesellschaften-mit-beschraenkter-Haftung2.
4. Hoffmann, Grumbach, and Hesse 1965.
5. Dreher and Gassebner 2013.
6. Djankov and others 2002.
7. Fairlie and Robb 2009.
8. The sample excludes the Syrian Arab Republic.

9. In both cases, natural log transformation was applied to the minimum paid-in capital requirement. The analysis was conducted using panel data with economy and year fixed effects regression. For the percentage of firms identifying corruption as a major constraint, the relationship is significant at the 10% level after controlling for income per capita. For the percentage of firms identifying access to finance as a major constraint, the relationship is significant at the 5% level after controlling for income per capita.
10. The relationship is significant at the 1% level after controlling for income per capita.
11. The relationship is significant at the 1% level after controlling for income per capita.
12. Ibrahim and Alagidede 2017.
13. Lauer 2017.
14. Tchamyou and Asongu 2017.
15. Gaitho 2013.
16. Based on research carried out by High Mark Credit Information Services Private Limited in 2013–14 in partnership with the World Bank Group.
17. This calculation is based on the original methodology of the depth of credit information index on a six-point scale.
18. Che Azmi and Kamarulzaman 2009.
19. Awasthi and Bayraktar 2015.
20. Braunerhjelm and Eklund 2014; Djankov and others 2010.
21. In the paying taxes methodology, the number of tax payments is recorded as one when a tax is filed and paid online regardless of the statutory number of filings.
22. See previous note.
23. EY global survey, VAT/GST electronic filing and data extraction, 2014, available at: https://www.ey.com/Publication/vwLUAssets/EY_-_VAT-GST_electronic_filing_and_data_extraction/$FILE/EY-vat-gst-electronic-filing-and-data-extraction.pdf.
24. Asturias and others 2017.
25. Madaus 2017.
26. The scheme of arrangement was initially introduced to English law in the Joint Stock Companies Arrangement Act of 1870.
27. Payne 2014.
28. Payne 2013.
29. Reorganization procedures were first introduced in the United States Bankruptcy Code of 1978.
30. The government of India adopted the Insolvency and Bankruptcy Code 2016, which was published in the official gazette on May 28, 2016.
31. Recovery rates are calculated by *Doing Business* as cents on the dollar recovered by secured creditors in resolving insolvency.
32. The sample includes the 155 economies covered by the World Bank's World Development Indicators database.